

FINANCIAL DISTRESS, LENDER PASSIVITY AND PROJECT FINANCE : THE CASE OF EUROTUNNEL

Laurent Vilanova^{*}
University of Lyon 2 - COPISORG

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ABSTRACT

The paper analyzes the difficulties of Eurotunnel, both the largest project finance company and one of the largest private workout in the history. Eurotunnel's distress was primarily due to the wrong governance structure set up at the origin. Long-term contracts, far from limiting agency conflicts between the firm's different claimants, led to major conflicts between initial sponsors. Once trapped by huge costs overruns, the banks transferred a significant part of their risks to poorly informed individual shareholders. We also investigate why the numerous banks did not trigger bankruptcy despite Eurotunnel's chronic distress. Lender passivity was mainly due to highly specific assets, political pressures and the threat of legal pursuits under the French debtor-friendly bankruptcy law. If passive, the banks made no concessions in debt restructurings and the firm remained highly leveraged. Overall, the case suggests that (i) managerial opportunism is a minor problem in project finance. The failure of large project companies may be primarily due to unresolved conflicts between owners (ii) governance problems associated to dispersed equity ownership may be worse in project companies than in other less indebted firms (iii) banks can find optimal to maintain a firm in chronic financial distress in order to keep a high bargaining power in subsequent restructurings while avoiding a costly bankruptcy.

JEL-Classification: D82, F34, G21, G32, G33

Keywords: Project Finance, financial distress, lender passivity, financial restructuring, bank lending

^{*} Université Lyon 2, Dépt. Ingénierie Economique et Financière, Monnaie Finance Banque, 93 chemin des Mouilles, 69131 Ecully Cedex, France. Email :laurent.vilanova@wanadoo.fr

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1. Introduction

On 14 September 1995, Eurotunnel announced it was suspending payment on its roughly £8 billion in junior bank debt. This default gave rise to one of the largest financial restructurings ever seen, implying renegotiation with a syndicate of more than 220 banks. Two years and a half later, in early 1998, Eurotunnel was successfully restructured. Since then, the stock price has stayed at a very low level (the price was divided by 10 since 1987) and financial difficulties have not been overcome even if formal bankruptcy has not been yet declared in England or France.²

Eurotunnel's 1995-1998 financial restructuring was the last step of a turbulent history since the signature of the Franco-British Treaty in 1987 launching the Channel Tunnel's project. The setting up of the project began with the November 1987 IPO that raised £770 million and with a syndicated loan of £5 billion. At that time, the total financing needs up to June 1993 (the anticipated date for the opening of the Tunnel) were estimated to £4.9 billion. These financing needs grew exponentially during the construction period as delays and unexpected costs multiplied. By May 1994, they stand up to £10.1 billion. Eurotunnel was forced to raise new cash from shareholders (two equity issues in 1990 and 1994) and from banks to cover these inflated costs. Just before the commercial opening of the tunnel in November 1994, the company presented a typical project capital structure with a leverage ratio (total debt on total assets) of 80%. A few months later, it became apparent that the firm would be unable to continue to service all of its interest payment obligations and accordingly on September 14, 1995, Eurotunnel suspended the payment of interest on existing junior debt (which represented 96% of total debt). This suspension of interest payments had the effect under the credit agreement of triggering a standstill, initially running to March 14, 1997, and which has been extended to December 14, 1997. The purpose of the standstill was to provide a period during which lenders would not take enforcement action against Eurotunnel. During the standstill, the Steering Group (a creditors' committee appointed by the members of the bank syndicate) was formed and negotiated with Eurotunnel to formulate proposals regarding the restructuring of the indebtedness of Eurotunnel. On October 2, 1996, Eurotunnel announced that it had reached agreement with the Steering

² The General Meetings of Eurotunnel which took place on April 7, 2004, have replaced the former Board of Directors by representatives of minority shareholders. One of the objective of the new management team is to renegotiate the terms of credit with banks. A new restructuring of the debt is expected as quoted by *the Financial Times* ("New Eurotunnel board to seek debt renegotiation" dated April 8, 2004).

Group on the outline of the Financial Restructuring, under which Eurotunnel would reorganize its debt and capital structure. The plan was approved by shareholders in July 1997 and took place in April 1998. It consisted in a complex mixture of debt for equity swaps, debt consolidation at under-market rate and convertible bonds.

Eurotunnel's distress is remarkable on several features. First, the 1995-1998 financial restructuring is one of the largest private workout ever seen in Continental Europe. The only comparable case is the workout of the Italian company Ferruzzi Group in early 90s described by Penati and Zingales (1998). Second, Eurotunnel is a well-known case of project financing. Kleimeier and Megginson (2000) precise that Eurotunnel has the distinction of being both the largest and second largest project financing in the history.³

These two features give a unique opportunity to study some still standing questions concerning financial restructurings and project finance:

- How can we explain the difficulties faced by this large project company? The question is all the more interesting since little is known about the performance of large project financed companies. The prediction is unclear: whereas empirical evidence suggests that large projects often fail (Flyvberg *et al.* 2002), the literature generally considers that project loans lead to a better performance than asset-based loans (Esty 2003, 2004). According to the agenda drawn by Esty (2004), this clinical study of Eurotunnel is a unique occasion to determine if the failure is due to the large size of the project “or if the means of financing (corporate, project or public finance) play a role” (Esty 1994 p.221).
- How did Eurotunnel finalize a financial restructuring involving so many creditors? In other words, we have to understand how Eurotunnel managed to solve the well-known coordination problem arising in a multiple creditors' context (Gertner and Scharfstein 1991).
- Why hasn't Eurotunnel overcome its financial difficulties yet and why do banks seem reluctant to trigger bankruptcy despite recurrent distress? At first glance, Eurotunnel's workout illustrates the results of Gilson (1997) who finds that out-of-court restructurings often lead to chronic financial distress due to modest concessions from lenders. Eurotunnel is however specific as the firm has been distressed for nearly 15 years. The reluctance of banks to trigger bankruptcy over such a long period is still an open question.

³ This is due to the two financing steps of the project: the original \$7 billion loan package arranged in August 1987 followed by the \$13.2 billion refinancing loan in June 1990.

The paper shows that Eurotunnel's difficulties were primarily due to the wrong contractual structure set up at the origin of the project. The main contracts were signed at a time when Eurotunnel had virtually no existence. Moreover, Eurotunnel lacked powerful sponsors to defend its interests against opportunistic contractors (especially, the construction companies). As a consequence, these co-contractors imposed long-term contractual features extremely unfavorable to the operating firm. These conflicts were not anticipated at the very beginning of the project since the construction companies initially held a part of Eurotunnel's shares. However, they quickly sold their participation, increasing the conflicts of interests with their weak client's management and new shareholders (essentially individuals). The analysis also shows that the other important contractor, i.e. the bank syndicate, while controlling Eurotunnel's board, was unable to stem the constructors' opportunistic behavior due to its lack of expertise on technical features.

Once trapped by huge costs overruns, the banks and Eurotunnel's bank-controlled management behaved in turn opportunistically and transferred risks to poorly informed individual shareholders. The dispersion of equity ownership resulting from the successive public right issues exacerbated creditor-shareholder conflicts and led to the expropriation of individual shareholders through strategic misrepresentations of the firm's projected revenues.

At the end of the construction phase, the indebtedness was so high that banks had real authority on the project. Nevertheless, the success of the 1995-1998 financial restructuring was long to take shape as negotiations between the banks and Eurotunnel lasted for more than two and a half years. Two reasons explain the difficulties encountered during this negotiation. The first one comes from the aggressive attitude of individual shareholders who tried to influence the terms of the financial restructuring. The shareholders seized this opportunity to denounce against the banks' opportunistic behavior during the preceding years. Despite their lack of power on a legal standpoint, some associations launched an intensive lobby on political authorities (especially in France) to obtain greater concessions from banks or to ask for a state intervention. The second reason comes from the high number of banks participating in the international loan syndicate. As the rule of unanimity applied, the loan syndicate had to be reorganized. Some initial lenders, opposed to the restructuring plan, sold their participation to new investors (mainly vulture investors) through Eurotunnel's debt unofficial secondary market. This reorganization led

to a concentration of lenders as the number of participant banks decreased from 220 to 174 during the financial restructuring period.

That leads to the third finding of our paper. We show that despite the statements of Eurotunnel's management, the banks made no actual concessions in the 1995-1998 financial restructuring. The term "concession" is in fact ambiguous: does it refer to a comparison between the face value of debt and the value of the new package (debt for equity swaps, convertible bonds,...) or to a comparison between the market value of the debt before restructuring and the value of the new package? Adopting the second view, it appears that junior debt was already greatly depreciated before restructuring (junior debt traded at 43% of its face value). Based on banks' projections at the time of restructuring, we estimate the value of the new package at 43-55% of junior debt's face value. If we take a broader view, by considering the rights issue of May 1994 preceding the interruption of payments in September 1995, we can even conclude to important wealth transfers between shareholders and banks. After the completion of the financial restructuring, Eurotunnel's indebtedness was too high to enable the firm's recovery. By this way, the banks tried to maintain a high bargaining power in subsequent restructurings in order to extract all the future operational revenues generated by the project. This behavior corresponds to the "controlled liquidation" described theoretically by Kahl (2002) and Vilanova (2004). The banks preferred to favor the continuation of activity even if financial distress was chronic. This strategy may be considered as optimal considering the high costs of liquidation due to legal complexity (the liquidation would have to respect French and English bankruptcy law), political pressures, reputational concerns and high specificity of the assets. We also show that the banks were reluctant to trigger formal bankruptcy because of the debtor-friendly French bankruptcy law. In this respect, Eurotunnel appears as a typical example of lender passivity.

Globally, the Eurotunnel case illustrates some of the governance problems explaining large projects' failure. Whereas the advantage of PF (project finance) is theoretically due to a simplified organizational and governance structure, large project companies cannot deal with a simplified structure as regard to the high number and the diversity of stakeholders. In particular, the importance of financial needs and the resulting dispersion of equity and debt ownership exacerbate conflicts in large project companies. In the same reasoning, the case illustrates some potential counterproductive aspects of limiting managerial discretion through the use of highly indebted capital structures and tight debt covenants. Far from increasing shareholder value, the

dominance of banks may on the opposite lead to an increased fragility of firms towards contractors. Even if banks act as “shadow directors” and assume authority, they may lack expertise and incentives to defend the interests of shareholders. In this spirit, the fact that banks did not trigger Eurotunnel’s bankruptcy despite chronic distress does not mean that they acted in the interests of shareholders. While primarily due to high liquidation costs, the soft behavior of banks was also motivated by their incentive to transfer risks to dispersed individual shareholders.

The rest of the paper is organized as follows. Section 2 presents a brief description of empirical and theoretical findings about the performance of large project companies and the difficulties of large private workouts. Section 3 provides a brief history of Eurotunnel before the suspension of payments in 1995. Section 4 analyzes Eurotunnel’s decline until 1995 and shows the devastating effect of the contractual structure adopted at the origin of the project. Section 5 describes the 1995-1998 financial restructuring. Section 6 provides evidence that the banks made no concessions during the 1998 private workout and used financial distress strategically. Section 7 concludes.

2. Performance of large project companies and impediments to large private workouts

According to Esty (2004, p.213), project finance “involves the creation of a legally independent project company financed with equity from one or more sponsoring firms and non-recourse debt for the purpose of investing in a capital asset”. The financing and governance structures of project companies differ drastically from the ones of other firms. The typical project employs very high leverage (debt-to-capitalization ratios between 70% and 80% are usual). Debt ownership is most of the time concentrated in the hands of a few banks (Esty and Megginson 2003). Equity ownership is also far more concentrated than in public companies as the typical company is privately held and has only one to three sponsors. The board of directors is supposed to control managers very closely as more than 80% of the directors are affiliated to the sponsoring firms. Lastly, the relationships between the company’s multiple stakeholders are essentially managed by way of long-term contracts. As research on this topic is still in its infancy, the main concern consists in identifying the motivations to use PF and in evaluating the relative performance of this type of financing.

To reach this objective, several studies adopt a descriptive approach. They show that PF is most commonly used for capital-intensive projects in tangible-asset-rich industries, located in riskier than average countries. PF loans have also a longer maturity and less restrictive covenants than more traditional syndicated lending (Kleimeier and Megginson 2000). At first glance, PF loans seem to be riskier than asset-based loans. Despite this higher risk, Kleimeier and Megginson find that PF loans have lower spreads than non-PF loans. They interpret this result in the following way: "...the project financing structure reduces important agency costs that are inherent in the creditor/borrower relationship" (p.87). This agency-cost motivation of PF is well-spread in the literature. The reasoning follows the line of Jensen's (1986) well-known free cash-flow theory. High leverage is supposed to increase managers' incentives to reach a high-performance level and to limit managerial discretion over free cash-flows. Concentrated equity ownership and debt ownership concentration in the hands of a few banks are also considered as efficient in reducing managerial agency conflicts. Lastly and according to the transaction-cost theory, long-term contracts are justified by the need to prevent the opportunistic behavior of related parties (input suppliers, output buyers) given highly specific assets. One may be however surprised by the unanimity of opinions as little evidence is known on the actual performance of PF companies.⁴ The positive impact of PF organizational structure on agency conflicts, if theoretically attractive, has still to be proven empirically. This is particularly the case concerning the performance of large projects as the few empirical studies dedicated to this topic show that these projects perform very badly and experience systematic costs overruns (Flyvberg et al. 2002, 2003).⁵

Whereas large projects often fail, little evidence is known on the resolution of financial distress in large project companies. Esty and Megginson (2003) argue that asset liquidations are rare and restructurings are the norm in PF loans. They find empirically that syndicates in countries with weak creditor rights and poor legal enforcement are larger and more diffuse. Based on this result, they assert that lenders choose smaller syndicates to facilitate monitoring and low-cost re-contracting when creditor rights are strong and create larger syndicates to deter strategic default when creditor rights are weak. Note however that their paper focus on the *ex*

⁴ Esty (2004) quotes only one (unpublished) study on the performance of project loans.

⁵ See Esty (2002) for additional references on this topic.

ante effect of bankruptcy law on PF debt structure and does not analyze the *ex post* resolution of financial distress of large project companies.

While not considering the specificities of PF, a large empirical and theoretical literature has analyzed the impediments to successful bank debt restructurings.

The first obstacle to restructuring debt during financial distress comes from the banks' reluctance to make concessions in a multi-creditor environment. In such a context, coordination problems between lenders arise and may result on the firm's liquidation. Many theoretical papers including Bulow and Shoven (1978) or Bolton and Scharfstein (1996) address this risk. The reasoning is the following: even if renegotiation is in the collective interest of creditors, each one has an incentive not to forgive principal or exchange debt for stock if he anticipates that enough creditors will restructure their claims. This so-called holdout problem is all the more serious that debt ownership is highly dispersed and should be then more intense for firms with public traded debt. The empirical studies of Asquith et al. (1994) and James (1995) confirm this prediction by showing that banks make few concessions for firms with public debt outstanding. For example, Asquith et al. (1994) find only one case (over seventy-six) where the bank agrees to take equity and to reduce principal. Even if large project companies have rarely public debt, the holdout problem may arise between participants in the loan syndicate. Lee and Mullineaux (2004) show however that banks structure the syndicate *ex ante* in order to facilitate *ex post* debt restructurings. More precisely, they find evidence that syndicate structure is more concentrated with fewer lenders when firms have a higher default probability. As suggested by Gilson (1997), holdout problems are not the sole impediment to debt reductions. Institutional lenders' preference for debt, adverse tax consequences of debt cancellation, cost of selling assets or managers' information advantage over outsiders may also explain why firms remain highly leveraged debt after out-of-court restructurings.

More paradoxically, the impediment to a leverage-reducing restructuring may come from existing shareholders. Shah (1994) and Lie et al. (2001) find a negative stock price reaction at the announcement of leverage-reducing exchange offers. This result is surprising because the majority of their sample firms experienced some form of distress at the time. Intuitively, one may consider in this context that a reduction of leverage reduces the likelihood of bankruptcy and preserves value for shareholders. For Lie et al. (2001), this potential beneficial effect for shareholders is counterbalanced by the fact that the announcement also conveys information that

the firm's financial condition is more fragile than expected. Though convincing, this explanation is not unique. In a context where the consent of shareholders is needed to validate the restructuring plan, shareholders may try to obtain increased concessions from lenders through priority violations (Wruck 1990). This phenomenon is not specific to formal bankruptcy nor to Chapter 11. As we will see later, the consent from shareholders was needed to implement Eurotunnel's restructuring plan due to the proposed debt for equity swaps.

At the notable exception of Frankel and Palmer (1996) and Penati and Zingales (1998), very few papers have analyzed large workouts in Continental Europe. Frankel and Palmer (1996) develop a case study on the 1994 rescue of the German conglomerate Metallgesellschaft. The context of this workout differs on several points from Eurotunnel's restructuring. First, the group's debt was concentrated in the hands of two banks that together summed 40 percent of voting rights and chaired the supervisory board. Second, the distress was originated by the aggressive marketing of Metallgesellschaft to enter U.S. oil markets and to the inconsistency of the firm's hedging strategy. Even if the terms of the financial restructuring is quite similar to the ones of Eurotunnel (debt for equity swaps, extension of a new credit line,...), Frankel and Palmer rather focus on the monitoring role of banks prior to the revelation of distress. They conclude that German *Großbanken* do not always monitor closely their client firms. Penati and Zingales (1998) give detailed information on another large workout: the one of the Italian company Ferruzzi in the early 90s. This case has many similarities with Eurotunnel: the restructuring plan involved more than 300 banks (220 for Eurotunnel) and nearly \$20 billion debt (roughly \$12 billion for Eurotunnel). The rescue was mainly achieved through debt for equity swaps. This clinical study shows first that the restructuring plan did not generate any efficiency gain. The plan also implied a large redistribution among creditors. Penati and Zingales find that the plan favored the largest creditors, in spite of equal priority. Thanks to debt for equity swaps, they became controlling shareholders and captured the full value of control. This last result confirms the existence of agency conflicts between lenders in syndicated loans. However, Ferruzzi and Eurotunnel differ on many points (see appendix A). Ferruzzi was a privately held company whereas Eurotunnel is a publicly quoted firm with dispersed shareholders. Ferruzzi was a diversified conglomerate whereas Eurotunnel is a single project firm. As a consequence, asset sales used by Ferruzzi to overcome financial distress were strictly impossible for Eurotunnel. The uncertainty about future cash flows was stronger in Eurotunnel's case: as documented next, the recurrent gap between

projections and realizations since the beginning of the project, illustrates the new and unproven technologies incorporated in Eurotunnel compared to Ferruzzi long-lived activities. These characteristics may explain why Eurotunnel's distress was more difficult to resolve.

Conforming to the view of Esty (2004), we consider that the complex institutional details as well as the important information problems associated to large PF companies and to large private workouts imply that "...the primary research methodology will be in depth and field based rather than broader and large sample statistical analysis » (Esty 2004, p.222). We obtained data from several sources: Eurotunnel financial statements and prospectus, the economic press, some participant banks' internal documents and interviews with some key actors. The interviewees include Eurotunnel former directors, members of Eurotunnel's staff, financial analysts, participant bankers and representants of minority shareholders⁶.

3. Eurotunnel before the 1995 suspension of payments: a brief history

The idea of a fixed link between France and England is not new. Many projects have been proposed since the beginning of the nineteenth century but were abandoned for technical, political or financial reasons. By the 1980s, the initial reluctance of the UK Government fell, provided that no public funding would be involved. The two governments launched the invitation to tender on April 2, 1985. The competing offers were receipted seven months later and the selection was effective on January 20, 1986. The retained offer was the one submitted jointly by France Manche (FM) and the Channel Tunnel Group (CTG), which formed twin holding companies (Eurotunnel SA and Eurotunnel PLC), chartered in France and Great Britain, respectively. The winning project consists in two single track rail tunnels and a service tunnel, including a shuttle service for cars and trucks. At the same time, the main legal instrument governing the construction and operation (The treaty of Canterbury) was signed by both governments in February 1986 (later ratified in July 1987) and the concession was formally awarded to Eurotunnel (a 50/50 joint venture between FM and CTG) on March 14, 1986 for 55 years. The concession fixed many obligations to Eurotunnel: in particular to operate and maintain the System during the Concession period, to ensure a steady flow and continuity of traffic through the System and to ensure that traffic may pass through the System with reasonable safety

⁶ The controversial nature of the Eurotunnel situation made the collection of information difficult. The price to obtain precise information includes the anonymity of interviewees. We respect this request in the paper.

and convenience. The concession also imposed the obligation to finance the System without recourse to government funds or guarantees of a financial or commercial nature.

Once the construction completed, Eurotunnel's system was supposed to transport freight and passengers by different means:

- Eurotunnel would operate its own trains through the Channel Tunnel: Le Shuttle Freight for trucks and Le Shuttles services for cars, coaches and busses. These trains operate between the two terminals of the Tunnel (Dover in UK and Calais in France);
- Eurotunnel would grant a concession to national railways operating freight and passenger trains between capital cities (Paris, London, Brussels).

Figure 1 demonstrates that the construction, operation and financing of the Channel Tunnel have required the implementation of a fairly complex set of contracts.

INSERT FIGURE 1 ABOUT HERE

If the complexity of the contractual structure is typical of project financing (see Esty 2003)⁷, Eurotunnel presents specific features. The most prominent one is certainly the leading role of banks and constructors. The initial shareholding of the company was shared between 10 construction companies and 5 banks which collectively provided £47 million. The owners (sponsors in the project finance literature) had tight control on the construction and the financing contracts. For example, the same 10 construction companies formed TML (Trans Manche Link) which was awarded the construction contract. In the same way, the 5 banks were also leading banks in the debt part of Eurotunnel's funding. As stated by Michael Grant, at the time Eurotunnel's Corporate Finance Manager, "...the 10 construction companies and 5 banks negotiated among themselves the Construction Contract and the detailed term sheet for the credit facilities" (Grant 1997 p.48). This strong bargaining power of banks and construction companies influenced the shape of major contracts. As we document in section 4, Eurotunnel's difficulties were not purely exogenous and were greatly due to the contractual structure adopted in the first years of the project. To introduce this idea, we present briefly now Eurotunnel's main contracts: the construction, railways usage and financing contracts.

⁷ For Esty (2003 p.8), "project finance is sometimes referred to as 'contract finance' because a typical transaction can involve as many as 15 parties united in a vertical chain from input suppliers to output buyers through 40 or more contractual agreements".

For many analysts, the construction contract is at the origin of Eurotunnel's subsequent difficulties. As stated in the November 1987 Offer for Sale "The (construction) contract provides financial incentives for the Contractor (TML) to complete the tunnels under budget and financial penalties if they are completed over budget or late". Despite these statements, the construction phase (which actually started in February 1988) was characterised by delays and cost overruns. At the time of the 1987 IPO, the construction and equipment costs of the Channel Tunnel were estimated to £2.7 billion and the completion of the construction phase was planned in summer 1991. In 1990, the anticipated costs were inflated to £4 billion. Finally, the construction of the tunnel cost more than £4.8 billion and was one year late.⁸ Originally planned to open in May 1993, the tunnel opened in late 1994.

INSERT TABLE 1 ABOUT HERE

Table 1 shows the evolution of projected construction costs over time at the different steps of the 7 years construction phase and illustrates cost overruns on the different pieces of works to be completed before the commercial opening of the Tunnel. This cost escalation was at the origin of a major conflict between Eurotunnel and the construction companies (The TML consortium). This conflict appeared from the very beginning of the construction schedule (*Le Monde*, October 4, 1988) as the construction companies were faced with technical problems caused by poorer than expected ground conditions under the English coast. These first difficulties led to tunnelling delays and cost overruns. In the following years, the main conflict concerned the cost of the rolling stock. The TML consortium argued that the Intergovernmental Commission (IGC) imposed major safety changes that led to considerably more sophisticated shuttles than expected. Jack Lemley (former Chief Executive of TML) asserted in this spirit that IGC had "free rein to change physical criteria without providing the money to do so" (Lemley 1995). TML run many disputes against Eurotunnel in order to obtain compensation for cost overruns (see Appendix B). This series of disputes was partly due to the incentives / penalties scheme of the construction contract. In reality, the construction contract signed in 1987 charged almost all the construction risk to Eurotunnel. For tunnelling costs (representing roughly 50% of overall costs), TML was

⁸ Note that the construction costs represented only a part of Eurotunnel's financing needs. Financing costs were also significantly inflated. In 1987 the financing costs were estimated to £975 million. In May 1994, Eurotunnel had already supported £2009 million financing costs and anticipated an additional £2748 million until 1998.

only responsible for 30% of cost overruns with TML's contribution being capped at a maximum of 6% of the target cost. Eurotunnel would pay 100% of any cost overruns over this cap. Even when the contract seemed to be favorable to Eurotunnel (TML was assumed to support 100% of cost overruns on the terminals and the fixed equipment in the tunnel), some covenants gave TML the possibility to transfer cost overruns to Eurotunnel. Indeed, the construction contract explicitly made provisions allowing TML to ask for price adjustments in case of unpredictable ground conditions, changes imposed by the IGC or asked by Eurotunnel. Hence, it is not surprising to notice that the resolution of the disputes was largely in favour of TML. Despite an agreement was found just before the rights issue of 1994, Eurotunnel had to pay for the main part of cost overruns.

The Railway Usage Contract was entered into on 29 July 1987 by Eurotunnel and the Railways. Under the Railway Usage Contract, the Railways are entitled to up to 50 per cent of the capacity of the System per hour in each direction, throughout the period of the Concession. In return, the Railways are obliged to pay usage charges for the use of the System by through trains. Usage charges comprise a fixed annual amount (estimated at £25 million per year) and a variable element made up of tolls (estimated at £9 per ton and £12.4 per passenger in 1996). There are guaranteed minimum payments during the first 12 years after commencement of full operations in December 1994 (estimated at £15 million per month). In 1993, a few months before the opening of the Tunnel, a dispute emerged between Eurotunnel and the Railways. Eurotunnel initiated an arbitration before the International Chamber of Commerce in 1993 in order to renegotiate the Railway Usage Contract. Eurotunnel argued that the Railways breached the contract on several features (concerning for example the starting date of Eurostar or the delay in the construction of high speed rail link between London and the tunnel) and claimed £2 billion. The claim was finally rejected.

When Eurotunnel won the offer launched by the UK and French Governments in early 1986, the projected financial structure was quite simple. The sponsors (5 banks and 10 construction companies) were supposed to invest roughly £50 million and a bank syndicate was supposed to bring most part of the additional funds. This schedule was initially respected as shown in Table 2. At the time of the October 1987 credit agreement, Eurotunnel's financing needs until the completion of the construction were supposed to be covered as the total funds obtained by Eurotunnel (£5,253 million including equity issues and debt) exceeded the projected £4 billion

construction costs. However, faced to the escalation of costs, Eurotunnel's capital structure has changed continuously during the construction phase. Table 2 summarizes the main operations prior to the 1995 suspension of payments. Overall, the table shows that the increasing Eurotunnel's financial needs were supported jointly by individual shareholders and by the banks. In fact, the additional funds brought by the bank syndicate in 1987, 1990 and 1994 were conditioned by the success of the public equity offers.

INSERT TABLE 2 ABOUT HERE

At the time preceding the suspension of payments (September 14, 1995), Eurotunnel's total indebtedness was approximately £8 billion (book value) whereas the amount of capital obtained through successive equity issues was roughly £2.5 billion. The debt to capitalization ratio of the project was then 77%, slightly higher than the 70% average quoted by Esty (2004) for project companies. Nevertheless, thanks to the success of the equity offers, this ratio was lower than the one anticipated in 1987 (Table 2 shows that the ratio dropped from 83% in 1987 to 77% after June 1994).

If Eurotunnel's debt to capitalization ratio matches the one of a typical project company, a striking difference stems from the high dispersion of ownership and debt in Eurotunnel's project. The junior debt issue of October 1987 involved 220 banks whereas the 1994 senior debt was provided by 67 banks. Table 3 shows that the ownership was also far more dispersed than in classical project companies. If the initial shareholding was concentrated in the hands of the sponsors (the construction companies and the banks held respectively 66.55% and 30.68% of ownership), these one gave up control almost immediately with the private issue of October 1986. This private issue (Equity 2) permitted the entry of institutional investors. The dilution of construction companies' shareholding was spectacular in the first years: their share of the equity decreased from 66.55% of Eurotunnel's capital in mid-1986 to 7% after the 1987 rights issue. In late 1996, a few months before the resolution of the crisis initiated by the 1995 suspension of payments, the initial sponsors (the banks and the construction companies) had only residual claims on capital. Exploiting data presented in Table 3, we estimate that banks' shareholding was in the 7%-13% range and that the percentage held by the construction companies was in the range

0%-8%.⁹ The dispersion of ownership was important as nearly two thirds of the units (64.3%) were held by 700,000 individuals (mostly French) following the successive right issues since the 1987 IPO.

INSERT TABLE 3 ABOUT HERE

The dispersion of ownership illustrates among other characteristics Eurotunnel's complex governance structure before the 1995-1998 restructuring. Perhaps more important, the transition from a typical project structure to the one of a public company deserves more attention. As we are not aware of any empirical or theoretical literature on this topic, several questions emerge: How to explain this change? Was it a consequence or a cause of Eurotunnel's chronic distress?

4. On the efficiency of the Channel Tunnel Project: wrong contractual structure, agency conflicts and over-optimism

Esty (2004) quotes several distinctive structural attributes of project finance: the creation of standalone entities, high leverage, contractual details, concentrated equity ownership and concentrated debt ownership. He argues that "the individual structural components fit together in a very coherent and symbiotic way, and can reduce the net financing costs associated with large capital investments" (Esty 2004 p. 26). On paper, Eurotunnel roughly fits the description made by Esty at one exception: the concentration of equity ownership. Is this sufficient to explain the difficulties encountered by Eurotunnel ?¹⁰ Here, the predicted efficiency of PF is clearly at odds with reality, as the viability of Eurotunnel has still to be proved after 10 years of commercial exploitation.

4.1. Wrong governance structure: short-term sponsors' opportunism and banks' inability to manage Eurotunnel

⁹ It is difficult to give precise numbers on shareholdings. Concerning banks, Table 3 states that banks held 6.69% of total units as registered shareholders and that Limited companies held 6.45% as bearer shareholders. Consequently, we can estimate that banks' shareholding was in the 7%-13% range prior to the completion of the financial restructuring. With the same reasoning, the percentage held by the construction companies was in the range 0%-8%.

¹⁰ One may ask if Eurotunnel has to be viewed as a failure or a success. On this specific point, it is interesting to note that engineers consider the project as a great success despite financial distress. See for example Vandebrouck (1995), a former director of TML, whose paper is intitled "The Channel Tunnel: The Dream Becomes Reality".

When the governments launched the invitation to tender in 1985, the winning bid was submitted by a group of banks and construction companies which controlled France Manche (FM) and the Channel Tunnel Group (CTG). Eurotunnel was created only a few months later, and was controlled by the same group of companies.¹¹ These initial shareholders gave up the control of Eurotunnel quite immediately (at the time of the 1986 private placement). With the passing of time, the absence of long-term sponsors appears as a major impediment to the success of Eurotunnel. As stated by Kirkland (1995), Eurotunnel's Technical Director from 1985 through 1991, "they (the banks and construction companies) had no interest in creating a 'Client' before they knew that their bid was successful...In any event, post-bid, it was in their interest to have a weak client" (p.5). Indeed, the banks and the construction companies were co-contractors of Eurotunnel for the two main contracts: the financing and the construction contracts respectively. As a consequence, Eurotunnel was engaged with extremely unfavourable long-term contracts that did not consider the question of the viability and profitability of the firm. The interests of investors and more precisely of the future public shareholders were not considered at that time. As noticed by Grant (1997), a former Eurotunnel's Corporate Finance manager, "The banks argued that they had to represent Eurotunnel in dealing with the construction companies...there was no strong representative of the future shareholders to negotiate the two key contracts at arm's length with the contractors and the banks" (p.48). So this is not surprising to notice that nearly all the contracts were challenged after 1987 by Eurotunnel's management (see Appendix B), at a time where individual shareholders held the majority of ownership and where banks began to realize that their claims were more risky than anticipated.

Although many reasons may explain the wrong contractual structure set up in the first months of the project, a key factor is certainly the inability of banks to manage Eurotunnel. Many arguments confirm the predominance of banks from the birth of the project: the banks were promoters of the project; contrary to the construction companies, they kept their shares after the 1986 private placement. Moreover, even if the banks held only a small part of shares after the

¹¹ The fact that Eurotunnel was an "empty shell" at the time of the bid is indirectly attested by the evolution of the number of employees over time: 25 in December 1986, 143 in November 1987 (Eurotunnel 1987, Financial restructuring proposals, p.131).

successive public rights issues (in 1987, 1990 and 1994), they were still dominant at the Board of Directors (see Table 4).¹²

INSERT TABLE 4 ABOUT HERE

The influence of banks was also reinforced by the fact that covenants have been quite immediately violated. For Grant (1997 p.50), “From mid-1989, Eurotunnel had to struggle to retain access to the Credit Agreement facilities and from October 1989, the banks had to waive a number of breaches of the Credit Agreement”. The 1987 initial credit agreement contained very strict covenants. Beyond classical interest coverage ratios, the credit contract included other events of default such as a delay in the commercial opening of the Tunnel after July 29, 1994, or more generally any “reasonable” expectation that a delay or a cost overrun would occur in the future. These voluntarily imprecise covenants gave virtually the banks the right to seize the assets at any time during the construction period¹³.

For some observers, the dominance of banks was a major impediment to Eurotunnel success during the construction phase.¹⁴ Faced to TML, the banks were unable to elaborate their own cost projections. This information asymmetry had disastrous effects. The banks thought at that time that TML’s estimates were high in order to increase the expected revenues of construction companies. In reality, TML communicated artificially low costs in order to be sure to win the tender offer.¹⁵ The shape of the construction contract was greatly influenced by this seminal mistake. As the banks and Eurotunnel’s management expected an underrunning of cost, they focused on incentives features and neglected penalties for delays and cost overruns. Once the banks and the management understood their mistake, disputes multiplied with TML. A settlement was signed in 1990, aimed at increasing the TML’s contribution to tunnelling cost overruns. But

¹² Inversely, constructors’ representatives left the board very quickly. The last one (the CEO of the French company Dumez) left the board on November 29, 1989. He invoked a conflict of interest between its position as administrator of Eurotunnel and its position as representative of TML (in conflict with Eurotunnel during the construction phase).

¹³ This point is discussed later (section 4.2). For details on financial covenants included in the 1987 credit agreement, see table 5 hereafter.

¹⁴ For example, Winch (1998 p.10) asserts: “the only source of cost information and an estimated outturn cost the banks had was TML”.

¹⁵ This type of perverse effect in tender offer is not specific to Eurotunnel. Robert Bain, associate infrastructure analyst at Standard & Poor's, asserts in the *Financial Times* dated April 10, 2004: “Rewarding the lowest-cost bidder in isolation [from other factors] seems to be a rather dangerous strategy. It leads to the submission of frankly unsupportable bids and it's these unsupportable bids that lead to trouble later”.

the disputes resumed a few months later and lasted until 1997. Cost escalation was also partly due to the banks' inexperience in shaping the terms of the construction contract. For example, the banks insisted on defining a unique contractor and on implementing fixed prices on the least defined portions of the work in order to reduce risk and to concentrate responsibility (Genus 1997 p.182). Clearly, these terms of the contract decreased the efficiency of the project: the lump sum costs registered the highest increase after the completion of the contract and the concentration on a unique contractor reduced the competition between suppliers.

Managing Eurotunnel and faced to these huge cost overruns, the banks had also to solve Eurotunnel's increasing financing problem. How did they react and adapt credit contracts to the deterioration of Eurotunnel's financial situation?

4.2. Lender passivity and the evolution of credit agreements

One may argue that the banks did not really choose to manage the project but that they were under constraint. The escalation of costs increased the need for financing. Whereas the banks had initially planned to fund £5 billion, the total amount of loans climbed to £7.8 billion at the end of 1994. At this point, it may be useful to draw a distinction between the leading banks and the other members of the syndicate. Five banks (National Westminster, Midland Bank, Crédit Lyonnais, Banque Nationale de Paris and Banque Indosuez) participated to equity 1 and can be viewed, in the same way as the construction companies, as promoters of the project. These same banks, with the exception of Banque Indosuez, were also the agent banks in the 1987 loan syndicate and three of them (Crédit Lyonnais, Banque Nationale de Paris and Banque Indosuez) were lead banks in Eurotunnel's IPO. Despite the constant implication of these banks, the banking community was sometimes reluctant to participate to the syndicate. In August 1987, 50 international banks underwrote the £5 billion Junior Debt. The group of 50 banks syndicated it to more than 200 banks. At the time, the operation was under pressure as the loan syndication had to be completed successfully before the Equity 3 could be launched. Despite the success of the syndication, the large size of the syndicate worried Eurotunnel. Michael Grant (1997), Eurotunnel's former Corporate Finance Manager, precises: "Eurotunnel was grateful for the support, but it (the large size of the syndicate) has nonetheless made the task of managing the Credit Agreement much more difficult" (p.49). At the end of 1987, the total funding of the

project was found and no other financing operation was planned for the future. At that time, Eurotunnel was not expected to use all its credit facilities as the construction costs were estimated to £4.8 billion and that the total funds obtained amounted to roughly £ 6 billion (Eurotunnel 1987 offer for sale).

The reluctance of banks to increase their funding appeared clearly in 1990 when Eurotunnel asked new funds to the original syndicate. As one third of the member banks refused to underwrite, the lead banks were obliged to increase their share of the funding. Political pressure was also used to convince reluctant banks. For instance, the British Government took contact with the Japanese one in order to persuade Japanese financial institutions to participate. The same reluctance appeared in 1994 when Eurotunnel asked for additional funding at the end of the construction phase. The banks set conditions to increase their funding: they asked for an equity issue assuming 50% of the financing requirements and for an increased priority for the new debt issue.

INSERT TABLE 5 ABOUT HERE

Table 5 summarizes the terms of the successive credit agreements. The evolution of these credit terms illustrates the ambiguous behavior of banks. On the one hand, the bank syndicate agreed to provide additional funds and to extend the repayment schedule (full repayment was extended from 2005 to 2010). This soft behavior was counterbalanced by the increased margins. For example, the 1990 amendment increased *ex post* the margin on the 1987 £5 billion loan from 25 basis points and implemented a margin up to 250 basis points on the £2.1 billion additional funds. In the same way, the 1994 senior debt agreement was characterized by high margins (up to 250 basis points) despite increased security. The banks did not significantly tighten covenants as Eurotunnel's financial condition deteriorated (the operating cash flow covenant did not change and the global debt service was slightly tightened in the 1990 amendment). Although general covenants were dropped in 1994, these covenants were specific to the construction phase and had no reason to be maintained after June 1994, a time where the construction was virtually completed. The banks' behavior depicted here differs strongly from the one described by DeAngelo et al. (2002). If in both cases, the borrowing firm was submitted to tight covenants that were regularly renegotiated, Eurotunnel's lenders did not manage to lower their risk exposure. Eurotunnel's

banks were unable to exploit early covenant violations to limit their losses at a low level. The bank syndicate's only compensation came from the high fees and margins charged to Eurotunnel. The table 5 data collectively imply that the participant banks had no real alternative but to finance the project despite its increased risk. The project's value if liquidated was virtually nothing before the completion of the tunnel as illustrated by the increased margin during the construction phase compared to the one applied after the completion. Consequently, the banks were constrained to keep financing the project despite the escalation of costs in the hope of a future commercial success of the tunnel.

Three reasons may explain the increased implication of banks. First, one has to consider the role of governments. Despite Eurotunnel was a private financed project, the French and British Governments were clearly involved in the successive funding operations. On the French side, the lead banks were state-companies who constantly supported Eurotunnel. On the British side, the government exercised pressure on financial institutions at different steps: during the 1986 private placement,¹⁶ during the 1990 and 1994 rights issues. Second, the acceptance of banks to fund additional costs may be due to the fact that an uncompleted tunnel would have a low liquidation value. For Wood (1995), member of the Disputes Panel for the Project since 1987: "The financing of the project became, towards the end, ludicrous with crises attending each call for further funding – in the sure knowledge that bankers' minds would be concentrated by the appreciation that an uncompleted tunnel project has little value beyond that of rearing mushrooms" (p.8). Third, additional funds brought by the bank syndicate were since the beginning conditioned to the success of equity issues. The 1994 debt/equity ratio (4.4) was even smaller than the initial one (5 in 1987). As emphasized by Stonham (1995), the lending banks were satisfied to transfer part of their risk to shareholders as equity offerings allowed Eurotunnel to obtain additional funds while decreasing leverage. Whatever the reasons underlying the increased implication of banks, it is clear that individual shareholders constantly supported Eurotunnel despite its deteriorated financial condition. What was the source of this support?

4.3. Over-optimism and banks' opportunism towards individual shareholders

¹⁶ Several sources indicate a strong intervention from the Bank of England. A poll for *the Financial Times* a few weeks before the private placement indicated that only one quarter of financial institutions were prone to buy shares.

In the last years, individual shareholders have complained about the banks' opportunistic behavior. These claims took place after the 1994 rights issue, a period where Eurotunnel's stock registered a severe decline (figure 2). So doing, individual shareholders criticized Eurotunnel's over-optimistic projections at the time of the previous public issues.¹⁷

INSERT FIGURE 2 ABOUT HERE

Since the birth of the project and the constant escalation of costs, the information communicated by Eurotunnel at the time of rights issues has been over-optimistic. Even if Eurotunnel decreased its traffic previsions gradually at each right issue, these previsions were still higher than reality as demonstrated in figure 3.

INSERT FIGURE 3 ABOUT HERE

The question is obviously to understand the decline of projected revenues during the construction phase (from 1987 to 1994) but also to understand why reality was even darker. Few explanations were brought by Eurotunnel's management concerning the regular downward revisions of projected revenues. The first source of mistake seems to be located in the anticipated increase of the total cross-Channel market. For example, the 1994 prospectus anticipated 71.66 million passengers in 1994 (77.72 million in 1995). However, the actual number of passengers was more than twice less (32 million in 1994 and 36.3 million in 1995). The second problem came from the underestimation of the competitors' reaction. The 1987 prospectus projected a moderate fall of prices for shuttles and ferries between 1986 and 1993 due to the opening of the Channel Tunnel (5 percent for passengers and 20% for freight). At the time, the projected 1993 revenue per car using the Shuttle or a ferry to cross the Channel was estimated to £55.8. In 1990, this price was revised upward to £64.5. These numbers were clearly overestimated as the average revenue per car was only £49.5 in 1995 and £34.4 in 1996. This forecast error was largely due to the unanticipated price war launched by the ferries after the opening of the Tunnel. During

¹⁷ In this way, Jean-Louis Dherse, Eurotunnel's managing director, declared in 1987 at the time of the IPO : "This is an ideal investment to finance the studies of your children ; you receive nothing at the beginning, but in turn, the value of your shares will treble in seven years !" (reported in *Les Echos*, October 29, 1996).

summer 1995, the ferries prices were 30% lower than one year before. Faced to this fierce competition and concerned with its objectives in terms of market shares, Eurotunnel was constrained to cut its prices on Le Shuttle and to propose special offers (40% of sales in 1995). This reaction was not anticipated by Eurotunnel's management.¹⁸ The price war was all the more fierce since the ferries obtained the extension of the right to sell duty goods to passengers. Whereas this right should have ended in 1993 following the signature of the Single Market Treaty in 1986, heavy lobbying succeeded in obtaining an extension until 1999. This extension enabled the ferries to subsidize the decrease of ticket prices with duty free sales. Finally, Eurotunnel anticipated a concentration between ferry companies in order to cut costs and to reduce over-capacity. In fact, this concentration did not happen as anticipated. The ferries tried to concentrate their activity through a merger between the two main companies (P&O and Stena) but this merger was refused by the Monopolies and Mergers Commission. As a result and even if Le Shuttle captured a satisfactory 40% market share at the expense of ferries as soon as 1996, the revenues obtained were deceiving in regard to forecasts. In the same way, Eurostar had to struggle against fierce competition from airline companies. However, the impact on Eurotunnel's revenues was only indirect as the commercial exploitation of the railway business on the London/ Paris/ Brussels was conceded to the national railways. In return, the railways agreed to make monthly payments integrating a fixed usage charge (roughly £25 million per year), a per person and per ton of freight variable charge (respectively £12.4 and £9 in 1996) and a contribution to operating expenses estimated to £35 million per year. For the ten first years, the contract guaranteed a minimum annual payment of approximatively £180 million. As the traffic was less than expected during years 1995-1997, Eurotunnel benefited from this contractual minimum payment.

As we can see, Eurotunnel's inaccurate projections were partly due to forecasting errors in a highly uncertain environment. However, other elements suggest that the gap between projections and reality was also due to strategic misrepresentations and that banks voluntarily transferred part of their risk to shareholders. This concern appears clearly if we consider more closely the court actions brought against banks and management following the 1994 equity issue¹⁹. The first claim,

¹⁸ In January 1994, a few months before the commercial opening of the Tunnel, Eurotunnel's managing director, stated : "The ferry companies have to construct new markets, with new lines, new cruise trips. In such a context, they will be unable to survive if they launch a price war" (*Les Echos*, January 18, 1994).

¹⁹ These court actions are still under process in France.

initiated by Christian Cambier Chairman of the “Association pour L’action Eurotunnel”, was made against several financial institutions for alleged insider trading at the time of the equity issue in May 1994. These institutions took short positions on Eurotunnel’s stock during the four months preceding the issue. According to experts and some interviewees these short positions were motivated by the private information they collected through their close relationships with Eurotunnel’s management. This private information contained bad news about Eurotunnel’s prospects in contradiction with the quite optimistic projections communicated to individual shareholders in May 1994. These institutions also used the “Chinese walls” argument to explain why they recommended their clients to subscribe the issue while they bet on a decline of the stock for their own account. The second claim, initiated in 1997 by another association of individual shareholders (ADACTE), was made against Eurotunnel for publishing false accounts and intended false projections in the 1994 prospectus. Even if this last claim was addressed against managers, banks were indirectly affected as they controlled the Board of Directors.²⁰ In the prospectus dated May 26, 1994, Eurotunnel estimated 1994 revenues at £137 million and 1995 revenues at £525 million. In fact, the actual revenues were significantly lower: only £25.6 million in 1994 and £226.6 million in 1995. This huge gap was partly due to the delay in the opening of the railway Paris-Brussels-London. The forecasts communicated in the May 1994 prospectus were founded on the assumption of an opening in early July 1994. In fact, the commercial exploitation began only in November 1994. The question is then obvious: how Eurotunnel’s management could ignore in May 1994 that the railway would not open before a few months? In fact, the French national railways announced the delay only one month after the issuance of the prospectus (on June 29, 1994). In a report prepared by two securities specialists working for the French magistrate conducting the investigation against Eurotunnel, the answer is clear: Eurotunnel could not ignore (the delay) on June 29 nor on May 26, the publication date of the prospectus. Conversely, Alastair Morton co-chairman asserted “Hindsight is not an available method of verification of a prospectus. Ours was comprehensively verified; it referred at length to the uncertainties facing the group; and it was approved by the board, its financial advisers and the relevant authorities in London and Paris” (*Financial Times*, May 12, 2000).

²⁰ Many financial analysts expressed their confusion about Eurotunnel’s projections in the financial press at the time of the equity issue. Some of them underscored the uncertainty about a potential price war with the ferries. Others were more pessimistic. An analyst even declared : “Eurotunnel’s projections are over-optimistic. A new equity issue will be necessary in two or three years” (*Les Echos*, May 27, 1994).

In some ways, Eurotunnel validates the view of Esty (2004) for whom PF individual structural components fit together in a very coherent and symbiotic way. But if the interconnection between individual contracts is strong, it may however lead to an increased weakness of the project. The first years of the project were characterised by opportunistic behavior from contractors. First, the building companies that were at the origin of the project and that imposed a construction contract where Eurotunnel had to carry all the risks associated to the project. Second, the banks that became dominant due to the increase of indebtedness and that transfer an important part of the risk to small uninformed shareholders. In this context, how did Eurotunnel manage to stem its increasing financial difficulties?

5. The 1995-1998 financial restructuring

Even if the project may be considered as financially distressed since 1989 (as argued in section 4 debt covenants were regularly binding since mid-1989), the situation worsened in September 1995 when Eurotunnel suspended officially interest payments on its junior debt. The lending contract had anticipated this eventuality as a standstill period of 18 months was explicitly written in the 1987 junior debt agreement.²¹ During this period, interest payments were suspended. The activation of the standstill by Eurotunnel was not entirely a surprise for observers. Since the beginning of 1995, the press stated the distressed situation of Eurotunnel and the repeated violations of covenants on junior debt. Eurotunnel's bank debt was trading in the secondary market at only 60% to 70% of par. The release of the 1994 results on April 10, 1995 confirmed the gap with forecasts and led to a 6.5 % fall of the share price. At the same time, Patrick Ponsolle, Eurotunnel's chairman, stated: "I wish to convince our banks to decrease the financing cost of the project, that means to look for refinancing tools in order to decrease the debt payments...There's come a time when the increase of margins threatens the repayment of the principal" (*Les Echos*, April 11,1995). Eurotunnel put pressure on banks by disclosing the amount of interests paid since the beginning of the project (£615 million) and the 1.6 % banks' margin on the financing of Eurotunnel (see details in Table 5 above). Even if the relationships between Eurotunnel and the banks had clearly deteriorated in the first months of 1995, the unilateral activation of the standstill was perceived as a negative signal by analysts. It publicized

²¹ The standstill period was maintained in the 1990 and 1994 amendments as quoted in Table 5 above.

the conflict between Eurotunnel's management, who declared acting on behalf of the small individual shareholders, and the banks.

INSERT TABLE 6 ABOUT HERE

The two and a half year negotiation described in Table 6 opposed two groups of stakeholders: the first one was formed by the managers and the shareholders, the second one by the banks. According to Patrick Ponsolle and Alastair Morton, co-chairmen of Eurotunnel, the decision to suspend payments was motivated by the Board's statement that foreseeable levels of revenue would not permit Eurotunnel to cover its interest charges (Eurotunnel 1997, Financial restructuring proposals p.2). Another declared objective of the managers was to protect the interests of the 750,000 Eurotunnel's shareholders. However, their message was ambiguous: whereas they tried to reassure shareholders by underlining the first commercial success of the Tunnel,²² they denounced at the same time the intolerable high level of interests. The managers argued for a decrease of interests and a rescheduling of payments. On the opposite, they clearly expressed their opposition to a debt for equity swap (*Les Echos*, September 15 1995). The defence of the shareholders' interest was also used as an argument to call for a state intervention. In January 1996, Patrick Ponsolle declared: "State intervention can take place if and only if everyone is convinced that individual shareholders have not been treated fairly" (*Les Echos*, January 11, 1996). As the negotiations with the banks were difficult, the management asked in January 1996 for the intervention of two *Mandataires ad hoc*, appointed by the French court *Tribunal de commerce de Paris* in order to serve as intermediaries between Eurotunnel and the representants of the bank syndicate. The court appointed two well-known personalities: Robert Badinter, a former French Socialist Minister of Justice and Lord Wakeham, a former British Conservative Minister. Simultaneous with the intervention of the two *Mandataires ad hoc*, the position of Eurotunnel's management evolved. In February 1996, the management declared its agreement to the idea of a debt for equity swap but asked for a high conversion price. The question was important as the share price was roughly 80 pences in February 1996 (see figure 4), a very low level compared to the share price before the suspension of payments (142 pences on

²² Alastair Morton, the English co-chairman of Eurotunnel, even forecasted in *The Wall Street Journal* dated May 29 1995 that : "This thing (*Eurotunnel*) will be the cash cow of all time" (p.12).

September 14, 1995) and to the public rights issues of 1987 (350 pences), 1990 (285 pences) and 1994 (265 pences). The divergence on this point was huge between Christian Cambier, the President of an association of individual shareholders, and the banks: whereas the former asked for a conversion price of 300 pences, the latter wanted an issue price close to the present share price.

INSERT FIGURE 4 ABOUT HERE

Faced to the management and the individual shareholders, the banks did not express an unanimous opinion. Some of them, especially the agent banks (Crédit Lyonnais, Banque Nationale de Paris, NatWest, Midland) wished to favour the continuation of activity. The argument was straightforward: in September 1995, the exploitation of the Tunnel was too recent to have a clear opinion of Eurotunnel's ability to succeed commercially. In this spirit, this group of banks thought it was too early to trigger bankruptcy and argued for a continuation of activity for almost one or two years. However, some banks argued for a tougher way for different reasons. First, some of them that earned huge profits in 1995 wanted to make provisions immediately. Second, some banks (especially the Japanese ones that owned 20% of capital at that time) faced legal problems due to the anticipated debt for equity swap solution. Last, many foreign banks were indifferent to political pressures from English and French Governments, that desired to avoid bankruptcy.²³ The divergence of opinions between banks was all the more important since the restructuring plan required unanimous consent of all the participant banks (220 banks).

One of the main question asked at the time lies in the uncertainties associated with the refusal of any restructuring plan by the shareholders or the banks. The standstill would then come automatically to an end and according to the concession signed in 1987 the banks would be allowed to enforce their right of substitution. As clearly specified in Eurotunnel (1997, Financial Restructuring proposals, p.4): "Substitution is a process whereby the Lenders may...have the Concession, its rights and obligations transferred to companies owned by them until such time as the Group's obligations to the Lenders have been satisfied, whereupon the Concession may revert

²³ The French and UK Governments made their contribution to Eurotunnel's financial restructuring by extending the concession in July 1997. The concession was extended to 99 years (instead of 52 years).

to the Group”. Beyond legal innovation, the right of substitution asked the question of the ability and the will of the banks to manage daily Eurotunnel. At the time following the suspension of payments, many observers were doubtful about the likelihood of a substitution.²⁴ The management of Eurotunnel was not in question and many bankers thought that they couldn’t do any better themselves. The political and legal consequences of such an action were also uncertain. The well-spread opinion was that the banks only used this threat in order to impose a debt for equity swap to reluctant shareholders. The bankruptcy was also a possible solution but it was generally considered as complex due to the dual legal environment.

When Eurotunnel announced an agreement with the Steering Group on the terms of a financial restructuring in October 1996, the conflicts between the shareholders and the banks were far from being solved. An uncertainty was still existing as the plan had to be approved unanimously by the banks belonging to the loan syndicate and by a majority of shareholders. The management, formerly opposed to a debt for equity swap, was now an ardent defender of this solution considered as inevitable. Patrick Ponsolle expressed clearly this change of mind²⁵: “In my opinion, the proposed plan has reached the maximum concessions the banks are willing to make. It’s an illusion to imagine that the banks would be prone to negotiate a new restructuring plan if a minority of shareholders rejects the plan. The banks are based in many countries: a lot of them find that their concessions are already excessive; most of them do not care about the political consequences of liquidation. There is a high probability that they find more straightforward to enforce their right of substitution” (*Les Echos*, June 24, 1997).

One key argument of the banks was also to underline their huge concessions in the restructuring plan. According to its new ally, i.e. the management, the banks would make a sacrifice of more than £2 billion if the plan was implemented.

Despite the coalition formed by the banks and Eurotunnel’s management, shareholder approval was far from being obvious. Some existing shareholders contested the fact that the banks would obtain the majority of capital following the restructuring. Surprisingly, some associations of individual shareholders expressed a preference for a formal bankruptcy.

²⁴ The financial press expressed this type of doubt as soon as October 1996. The following citation is representative of this opinion: “The banks will probably agree, eventually, to some form of refinancing because, if Eurotunnel goes bust, they would either have to find a firm to run it for them, or would need to persuade a buyer to bail them out. The first would be difficult, the second almost impossible.” (*The Economist*, January 20, 1996).

²⁵ For some interviewees, this change of mind was only artificial. They consider that Eurotunnel’s managers were affiliated to banks and that their apparent conflict with banks was part of a strategy aiming to obtain the approval of individual shareholders.

Simultaneously, they claimed for a nationalisation of the Tunnel. They also called for the entry of a new powerful shareholder, the French national railways company SNCF. Both solutions were clearly in contradiction with the Article 1 of the Treaty that specifies the strictly private financing of the project. The individual shareholders' strategy was clearly to call for a political intervention. In this view, the call to reject the plan was used as a strategic tool in order to put pressure on the French Government, considering the 720,000 French individual shareholders. Finally, convinced that the banks would not accept further concessions, a large majority of shareholders approved with the financial restructuring proposals in July 1997. The bank syndicate approved the plan in January 1998.

The restructuring plan, as presented to the shareholders in April 1997, was established on the basis of the junior debt outstanding at October 15 1996, the date corresponding to the agreement between Eurotunnel and the Steering Group. The junior debt to restructure was in the range £7872 to £8597 million depending on the exchange rates considered.²⁶ Obviously, these amounts were just illustrative as the exchange rates were susceptible to change until the signature and the effective implementation of the plan. The restructuring plan was incredibly complex as anticipated by many observers. It consisted in the distribution of five instruments (common equity, convertible equity notes, participating loans, resettable facility, new Junior Debt) in exchange of existing Junior Debt. Table 7 summarizes the main terms of the restructuring instruments. The proposal also planned to distribute free warrants to existing shareholders. If exercised, these warrants would serve to repay in cash a part of the convertible equity notes and would give existing shareholders the opportunity to retain a majority of Eurotunnel's equity. However, the likelihood of exercise was low as the price was planned to be around £1.24, far higher than the price of the unit in April 1997 (around 70 pences). The last part of the plan consisted in the possibility for Eurotunnel to issue stabilization notes, bearing no interest through 2005 (see Appendix C for further details). These notes gave Eurotunnel the possibility to capitalise the shortfall between the interest payable and the interest actually paid in cash on the

²⁶ Eurotunnel's junior debt was constituted of several tranches. The amount of junior debt outstanding at October 15, 1996, split by currency was the following (we use m for million): £4126m, FRF28992m, \$349m, BEF21341m, ECU252m. As the main part of the debt was in £ and FRF, the translated sterling amount depends mainly on the FRF/£ exchange rate. £7872m corresponds to a 10.00 FRF/£ exchange rate and £8597m to a 8.00 FRF/£ exchange rate.

new junior debt and the Resettable Facility during the stabilization period (ending in December 2005).

INSERT TABLE 7 ABOUT HERE

In general, the complexity of the plan made very difficult for Eurotunnel's individual shareholders to evaluate precisely the consequences of the financial restructuring. We analyze this question in the following section.

6. Debt restructuring and the banks' strategic use of chronic financial distress.

At the time of the suspension of interest payments, a financial analyst declared: "I have no doubt that the banks will impose their point of view. Shareholders will have no voice" (*Les Echos* September 15, 1995). This prediction was clearly at odds with the statements of Eurotunnel's management in the months preceding the general meeting calling for shareholder approval. Technically, the complexity of the restructuring scheme made very difficult for shareholders to evaluate the distributional consequences of the plan. In this section, we will try to evaluate these consequences on an *ex ante* basis, in other words with the information available in April 1997.

INSERT TABLE 8 ABOUT HERE

The most visible consequence of the restructuring was the dilution of existing shareholders' claim following the implementation of the plan. This dilution had two origins. First, the debt for equity swap which gave the banks an immediate 46.66% share ownership. Second, a differed dilution due to the repayment in equity of the convertible equity notes. An uncertainty was still standing in April 1997 about the number of new shares necessary to repay the equity notes at maturity (December 31, 2003). Table 8 illustrates the two extreme scenarios. In the case where the existing shareholders would exercised their 2001 and 2003 free warrants, a substantial amount of the notes would be repaid in cash and the banks' ownership would be limited to 44.48% (case n°1 in table 8). In the case where the existing shareholders would not exercise their warrants, the banks' ownership would climb up to 60.60% in 2003 (case n°2). Notice however

that the case n°1 supposed implicitly a sharp 77% rise of Eurotunnel's stock price before the maturity of warrants (respectively 2001 and 2003) as the exercise price was fixed at £1.24 and the stock quoted around 70 p in April 1997. Moreover, the exercise price was up to 15.38 % over the issue price of equity used in the debt for equity swap. In brief, only a strong recovery of Eurotunnel in the following years would permit the existing (mostly individual) shareholders to retain the majority of ownership.

INSERT TABLE 9 ABOUT HERE

The welfare consequences of the restructuring plan for the banks were far more difficult to evaluate. Beyond the banks and Eurotunnel's management statements, the actual banks' sacrifice may only be appreciated thanks to a precise valuation of the instruments distributed through the restructuring plan. We established valuations of this package with the information available at the time of the restructuring and through different scenarios. Table 9 summarizes the two extremes values we obtained for the new package and makes a comparison with the face value and the market value of Eurotunnel's junior debt prevailing before the restructuring (more details about our valuation are given in Appendix C). As documented in Table 9, the banks made only concessions in comparison with the face value of the old junior debt. As regard to the last traded prices before the restructuring (the market value of the old junior debt), no concessions were made.²⁷ In this view, Table 9 shows that the projected value of the new package was in the range 100%-128% of the last prices. In other words, by accepting the restructuring proposals of April 1997, the banks simply ratified the losses already reflected in the depressed prices of Eurotunnel's debt on the secondary market. This explains certainly why the bank syndicate approved the plan despite of coordination conflicts between various participants. In March 1997, one of Eurotunnel lead bank advised its institutional customers to buy Eurotunnel debt arguing that paying 43% (the market price of debt) to receive a package of new securities worth 50-55% within 6 months would generate an annualized return over 30 %. This type of argument convinced some investors to replace several reluctant banks, especially the Japanese ones, that

²⁷ These last traded prices correspond to the one observed on Eurotunnel's debt unofficial secondary market.

vastly sold their debt on the secondary market before the formal approval.²⁸ These transactions were concluded at prices in the range 54% to 57% of Eurotunnel's debt face value, close to our own estimation of the new package's value.²⁹

The second important question about the restructuring plan deals with Eurotunnel's ability to face interest charges in the future. In other words, was the decrease of interest charges sufficient to avoid chronic financial distress? Figure 5 suggests that the interest charges planned in the restructuring plan (and consequently the global terms of the restructuring) were set in order to align interest charges with the predicted EBITDA almost in the short term. During this stabilization period³⁰, nearly all the expected cash flow was planned to be dedicated to the payment of interests to the loan syndicate. Figure 5 shows that the future of Eurotunnel was still hazardous after the completion of the financial restructuring. Short-term interest coverage was anticipated only in 2001. Moreover, Eurotunnel's projections were based on the assumption of a sharp and steady growth of EBITDA during the stabilization period. This reflects the chronic optimism of Eurotunnel's managers. In April 1997, they declare: "The directors intend that dividends will be paid to shareholders as soon as possible. As shown in the projections, good operating performance by the Group should allow a first dividend to be paid in 2006, in respect of 2005...Should the outcome be better than that indicated, Eurotunnel may be in a position to pay dividends earlier than 2006" (Eurotunnel 1997, Financial restructuring proposals, p.3). As underlined by many financial analysts, the main problem was to determine the real ability of Eurotunnel to increase its operating income in the following years. The projections communicated by the Group were quite optimistic as regard to the present situation of Eurotunnel (the projections are based on a 12.4%-14.9% annual growth of EBITDA through the period). The 40% reduction of interest charges, if important, did not give the firm a great margin as shown in figure 5. Should the realizations stand at an inferior level, the distressed situation would not be overcome. The probability of a subsequent distress period, especially at the end of the stabilization period, was very high. Why the banks did not accept any relief? In our opinion, the

²⁸ The identity of the new investors was not publicized. However, the financial press released information from distressed-debt traders asserting that a significant part of Eurotunnel's junior debt (£1.5 billion) has been sold to American funds specialising in bankrupt firms during the years 1996-1997 (*The Economist*, May 22, 1997).

²⁹ For example, *Bank Letter* dated September 29, 1997, reports that Tokai Bank sold 110 million of Eurotunnel bank debt to Bankers Trust at 54 ¼ in the preceding week.

³⁰ The 1997 financial restructuring proposals give Eurotunnel the possibility to miss interest payments on debt if cashflow proves insufficient until the end of 2005. This period is known as the stabilization period. During this period, interest payments may be paid in zero coupon stabilization notes that do not become eligible for interest until after December 31, 2005.

banks were mainly concerned with maintaining their bargaining power towards the management and the shareholders. Should they have agreed for more concessions, they would have lost the possibility to extract all future operating revenues to the benefit of shareholders. Maintaining a high debt level ratio can be interpreted as a means to preserve the high bargaining power of the loan syndicate in subsequent restructurings and to avoid wealth transfers to shareholders. This interpretation fits well with the arguments advanced by Gilson (1997) to explain why firms remains highly leveraged after out of court restructurings. Among the reasons advanced by Gilson, the lack of incentives of institutional lenders to make financial concessions that mostly benefit junior claimholders and the firm's inability to sell assets to pay down debt seem key elements to explain Eurotunnel's chronic financial distress.

INSERT FIGURE 5 ABOUT HERE

The uncertainty concerning the long-term success of the plan asks also the question of lender passivity. At first glance, one can be surprised that the banks did not seize the assets of Eurotunnel either through the exercise of their substitution right or by triggering formal bankruptcy. For observers however, this passivity was not new as lenders have waived regularly covenants since the seminal credit agreement and the launching of the project (see section 4 above). In this view, the 1995-1998 financial restructuring was just the last step of the banks' passivity. However, the situation in the years 1996-1997, during which the decisive negotiations took place, was quite different from the one during the construction phase. The tunnel was completed and Eurotunnel's liquidation value was higher even if the assets were very specific. Moreover, even if Eurotunnel won a 40% market share of the cross-channel market, the commercial exploitation of the tunnel was deceiving as actual operational profit and revenues were far lower than those projected. Consequently, Eurotunnel's continuation value was clearly less in 1996-1997 than before the completion of the construction. Are there any additional reasons explaining the reluctance of banks to seize the assets?

Several interviewees (banks and member's of the staff) argue that the banks were concerned with the fact that the commercial exploitation of the Tunnel was too recent in 1997-1998 to draw conclusions about the viability of the project. In this view, the best strategy was to maintain Eurotunnel as a going concern and to wait for more precise information. This line of reasoning

corresponds closely to the “controlled liquidation” argument of Kahl (2002)³¹. If receivable, the argument is not totally convincing. For many analysts, the uncertainty about the future commercial performance of Eurotunnel was not so high at the time of the restructuring and the probability of a significant change of Eurotunnel’s market share and revenues was low.³²

Lender passivity might also be explained using the contribution of Diamond (1984). Theoretically, Diamond predicts that, when enforcement costs are high, lender passivity may be reduced by the use of short term contracts and by borrowing through a high number of lenders. For him, the high number of lenders acts as a commitment to going to court when the borrower defaults and enhances the *ex ante* incentives of the borrower. He quotes the results of Detragiache et al. (2000) and Ongena and Smith (2000) who find that loan syndicates contain more lenders when enforcement costs are higher as consistent with his theory. Recently, Sufi (2005) explores empirically the syndicated loan market and finds two interesting features of syndicate structure: in order to increase monitoring, the lead arranger retains a larger portion of the loan when the borrowing firm is more opaque; when the borrower is more likely to renegotiate *ex post* the loan, lead arrangers add *ex ante* participants with very small portions of the loan in order to reduce strategic default. The Eurotunnel case shares some of the features evoked by Diamond (2004) or Sufi (2005). We already know that enforcement costs were high and that the size of the loan syndicate was very large (despite a decrease from the initial 220 lenders to 174 in May 1997). Examining more precisely the structure of Eurotunnel’s bank syndicate, it appears that the 10 leading banks held 37.75% of Eurotunnel’s junior debt in May 1997. At the same date, there were numerous banks holding a small portion of the junior debt (54 lenders had an individual claim of less than 0.1% of the junior debt and 83 less than 0.2%). Following Diamond (2004) and Sufi (2005), this type of syndicate structure should have made any restructuring quite impossible. The only departure from Diamond’s theory comes from the long-term maturity of the debt. Clearly, this specific feature is not sufficient to explain lender passivity as lenders had the

³¹ Kahl (2002) argues that creditors have incentives to postpone the liquidation decision and to wait for more information when there is sufficient uncertainty about the firm’s viability. This theory explains the long-term nature of financial distress and the creditors’ incentive to leave leverage high after a workout.

³² The fact that there is little uncertainty about Eurotunnel’s cash flows is also evoked in current negotiations between Eurotunnel and its creditors. Jacques Gounon, the current CEO, asserted a few months ago: “the substitution would not change the cash flows and you will have on top of that to manage the company, which is not an easy task” (*Financial Times*, June 20, 2005).

possibility to ask for liquidation once Eurotunnel defaulted on its obligations.³³ As a consequence, the most convincing explanation of lender passivity comes here from the low benefits of liquidation compared to high enforcement costs due to political consequences and legal complexity.³⁴

The bankruptcy solution had also a major drawback for the banks that feared legal disputes under the French doctrine of “soutien abusif”. This doctrine stipulates that the banks of a bankrupted firm can be held financially responsible if it can be proved that they had delayed the triggering of bankruptcy. Paradoxically, the more effective way for the banks to counter this threat was to avoid bankruptcy by rolling over their claims on Eurotunnel. Overall, the Eurotunnel’s case shows the limits of the *ex ante* mechanisms used to guarantee a tough behavior of the banks should the firm defaults.³⁵ On an *ex post* point of view, lender passivity was here optimal even if one can ask himself about the adverse *ex ante* effect on other stakeholders’ incentives (for example, on the behavior of construction companies).

The last point concerns the behavior of individual shareholders during the 1995-1998 financial restructuring. The banks’ reluctance to seize the assets contrasts with the attitude of several associations of shareholders who lobbied for a formal bankruptcy. At first glance, this attitude was surprising as shareholders had nothing to gain from bankruptcy. However, it illustrates the importance of political concerns in the Eurotunnel’s case where more than 700,000 individual shareholders were implicated. Through their action, individual shareholders tried to trigger a state-intervention either directly (through the nationalization of the Tunnel) or indirectly, through governmental pressures on the bank syndicate. In other words, some of the shareholders clearly tried to lobby for an APR violation either through political pressure or through the threat

³³ Diamond (2004) considers that when the number of lenders is high, one individual lender has not sufficient resources to refinance the other lenders’ claim who asks for repayment. In our case, a few number of lenders asked for repayment (several Japanese banks) and the other lenders had no difficulties to buy out these claims.

³⁴ The fact that political pressure dominated coordination problems is attested by many sources. Some traders, quoted in Bank Letter dated October 27, 1997, said about approval delays: “There are no holdouts...The process takes longer because there are so many international banks...When you get down to this few banks (the ones that take time to approve the restructuring plan), there’s no way it [won’t] go through. If you’re holding up the international restructuring of Eurotunnel, the political pressure you’d get would definitely be on.”

³⁵ Alternatively, the dispersion of debt ownership may have strengthened the credibility of the banks’ threat to liquidate if we consider the small concessions of the bank syndicate in the 1995-1998 restructuring. However, this interpretation along the lines of Sufi (2005) suffers from the fact that the number of lenders decreased from 220 to 174 between 1987 and 1997.

of legal pursuits against banks.³⁶ As stated by Georges Berlioz, an attorney of an association of shareholders: “The real reason they have not formally declared bankruptcy is (because) they know the banks face civil and criminal liabilities” (quoted in Winninghof 1996). Even if this shareholders’ pressure for bankruptcy didn’t prevent the implementation of the restructuring plan, one can imagine that this pressure obliged the lenders to make greater concessions than expected in 1995.

7. Conclusions

The Eurotunnel case illustrates how agency conflicts and an ill-defined contractual structure can explain the failure of large project companies. The case also demonstrates how lender passivity can naturally emerge when a firm’s financial condition deteriorates and why banks can have incentives to maintain chronic financial distress while avoiding formal bankruptcy.

The failure of large project companies is a largely unresolved problem. The question is all the more interesting since the growing literature on project finance suggests that this type of loan has a superior ability to reduce agency problems and should result on high performance. Our findings on Eurotunnel are radically different. The project finance structure was at the origin of major agency conflicts that contributed to underperformance. At the very beginning of the project, the banks were unable to stem the opportunism of the other initial sponsor (the construction companies) due to their lack of expertise. When Eurotunnel’s financial condition deteriorated, the banks who took the control transferred a part of their risk to individual shareholders. Generally, the Eurotunnel case illustrates the dangers of ill-defined long term contracts, the problems created by the transition from a private to a public ownership and the limits of bank-dominated companies.

Eurotunnel sheds also some light on the problem of lender passivity. This passivity is surprising since Eurotunnel’s debt structure was originally defined to prevent this type of problem. What was wrong? We argue that, despite the high number of participant banks in the loan syndicate, the banks have constantly tried to avoid bankruptcy. Following Diamond (2004),

³⁶ These facts may seem surprising outside the French context. However, the French bankruptcy law is certainly one of the more debtor-friendly in the world. Following the political economy approach used by Berglöf and Rosenthal (2003), the French bankruptcy law can also be considered as motivated by a high antipathy against banks. Note on this point that the French doctrine of “soutien abusif” shares some resemblance with the US doctrine of “equitable subordination”.

they did not respect their *ex ante* commitment to going to court should the financial situation deteriorates. Two main reasons are provided. First, Eurotunnel's liquidation value was very low as its assets were highly specific. Second, enforcement costs were very high due to the political and legal context. The high number of individual shareholders made bankruptcy difficult as the governments (and especially the French one) wished to avoid adverse political consequences and exerted an intense lobbying over banks. The banks had also incentives to favour continuation due to the threat of legal pursuits under the debtor-friendly French bankruptcy law.

If passive, the banks made limited concessions. Our valuation shows that the restructuring plan finalized in 1998 led to a wealth transfer from shareholders to the bank syndicate. Eurotunnel remained highly leveraged after the restructuring. Maintaining Eurotunnel in chronic financial distress was an optimal strategy for banks since they kept a high bargaining power in subsequent restructurings while avoiding a costly bankruptcy.

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Figure 1. Eurotunnel's initial set of contracts

We note in italics the main contracts governing Eurotunnel and their date of signature. Data are drawn from Eurotunnel's documents and prospectus.

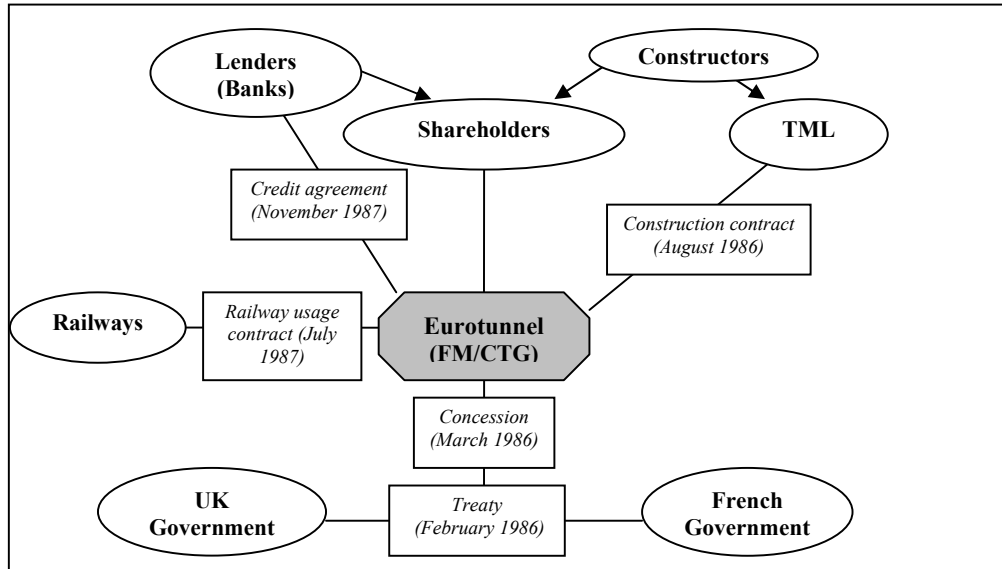


Table 1. Evolution of projected construction costs (in £ million – 1985 prices)

Data are drawn from Eurotunnel prospectus (1987 offer for sale, 1990 and 1994 rights issues).

	November 1987	November 1990	May 1994	% change 1987-1994
Tunnels	1329	2009	2110	58.8%
Terminals	448	491	553	23.4%
Fixed equipment	688	814	1200	74.4%
Rolling stock	245	583	705	187.8%
Bonuses and contingencies		72	46	
Direct works			36	
Additional costs until the completion of the Tunnel			194	
Total construction costs	2710	3969	4844	78.8%

Table 2. Evolution of Eurotunnel's debt and capital prior to the 1995-1998 restructuring

All data are drawn from Eurotunnel's internal documents (company reports and prospectus). The terminology Equity 1, Equity 2,... refers to the one used in Eurotunnel's internal documents. The last column is computed on the basis of the exchange rate at the date of the operation. The amounts reported in the fourth column do not consider the various fees supported by Eurotunnel.

Date	Name of the operation	Subscribers	Amount obtained	Debt to capitalization ratio after the operation
September 1986	Equity 1	Founder shareholders	£47 million	0
October 1986	Equity 2	Private institutional placement	£206 million	0
October / November 1987	Junior debt	Bank syndicate with 220 banks	£5 billion	83%
	Equity 3	Public issue	£770 million (220 million units at £3.5)	
October / November 1990	Junior debt	Additional funding by the bank syndicate and the EIB (The European Investment Bank)	£2.1 billion (£1.8 billion from the syndicate and £30 million from the EIB)	81.7%
	Equity 4	Public issue	£568 million (£199.4 million units at £2.85)	
1991	Junior Debt	Additional funding by the European Coal and Steel Community	£200 million	82.1%
June 1994	Equity 5	Public issue	£858 million (324 million units at £2.65)	76.66%
	Senior debt	Senior debt facility from a syndicate of 67 banks and top-up loan from 2 banks	£693 million (syndicated loan) £50 million (top-up loan)	

Table 3. Evolution of shareholding from the 1986 incorporation of Eurotunnel through the 1997 financial restructuring proposals

Data are from Eurotunnel's company reports and prospectus. We note n.a for data non available.

	09/86		12/89		12/93		12/96	
	Number of shares	%	Number of shares	%	Number of shares	%	Number of shares	%
<u>Registered shareholders</u>								
Banks	8135 740	30.7%	6 308 265	1.90%	4 669 752	0.87%	61 493 139 (Banks and nominees)	6.69%
Nominees			51 275 715	15.43%	43 949 849	8.17%		
Construction companies	17 648 100	66.5%	n.a		n.a		n.a	
Trusts			1 283 513	0.39%	3 060 171	0.57%	3 198 133	0.35%
Insurance companies	736 160	2.8%	12 165 222	3.66%	719 774	0.13%	345 712	0.04%
Pension trusts			1 454 749	0.44%	1 333 513	0.25%	26 104	0.00%
Investment trusts			977 347	0.29%	668 904	0.12%	124 213	0.01%
Other companies			35 311 637	10.62%	21 158 130	3.93%	33 463 082	3.64%
Individuals			45 865 061	13.80%	60 814 787	11.30%	94 603 879	10.29%
Sub-total registered shareholders	26 520 000	100%	154 641 509	46.5%	136 374 880	25.3%	193 254 262	21%
<u>Bearer shareholders</u>								
Limited companies			41 167 978	12.39%	52 574 870	9.77%	59 323 322	6.45%
Individuals			100 030 629	30.09%	235 141 683	43.70%	496 704 835	54.02%
Foreign holders			19 424 473	5.84%	73 775 278	13.71%	142 267 156	15.47%
Others			17 127 191	5.15%	n.a		11 854 703	1.29%
Funds, Trust (OPCVM)			n.a		38 030 072	7.07%	16 148 941	1.76%
Banks			n.a		2 148 954	0.40%	n.a	
Sub-total bearer shareholders			177 750 271	53.5%	401 670 857	74.7%	726 298 957	79%
Total shareholders	26 520 000		332 391 780		538 045 737		919 553 219	

Table 4. Eurotunnel's board of directors

Data are drawn from Eurotunnel's company reports and prospectus. We used also Dafsaliens (a French database) to determine if the directors are affiliated to the banks or to the constructors. A director is considered as a bank representative if he is either employed by a bank or is a bank board member.

	Banks' representatives	Constructors' representatives	Others
1987	9	2	7
1990	11	0	5
1994	10	0	7
1997	7	0	7

Table 5. Evolution of Eurotunnel's credit agreements from 1987 to 1994 (principal, interests, covenants)

All the data are drawn from Prospectus released in 1987 (IPO), 1990 (Equity Offering), 1994 (Equity Offering) and 1997 (Financial restructuring proposals) and from internal documents of several participating banks. Fees are expressed in basis points (bp). For the presentation of the different types of covenants, we use NPV for Net Present Value and CF for Cash Flow). Concerning covenants, we note in italics the threshold under which Eurotunnel is considered in default (other thresholds that set the conditions for refinancing exist but are omitted for brevity). Billions are denoted by b and millions by m.

			06/94 issuance of senior debt and amendment of junior debt credit agreement													
	11/87 junior debt agreement	11/90 amendment on junior debt	Amendment on junior debt	New senior debt												
Borrowing limit	£5b (£4b for the main credit and a £1b line of credit)	Additional £2.1b (£1.8 b from the syndicate and £300m from the European Investment Bank)	No additional junior debt but revision of the credit agreement due to the issuance of senior debt	£743m												
Amortization	From 11/95 to 11/05	Extension of the repayment schedule Regular schedule : From 11/96 to 11/10. Alternative schedule: From 11/00 to 11/12.		From 08/00 to 02/06												
Fees	Front-end fees (Arrangement + underwriting + participating): 25 bp + 7/8 % Commitment fee : 1/8 % per year charged on undrawn part. Eurotunnel indicates semi-annually the amount it projects to draw : if the amount drawn is lower than the projected amount, the commitment fee is ¼ % per year on the difference; if the amount drawn is higher than projected, the new commitment fee is 5/16 % per year on the difference.	<u>High commissions on the additional £18b :</u> Arrangement fee : 25 bp Commitment fee : 1 % per year on additional funds if the bank has participated to the loan in the same proportion that in 1987; 2% per year if the bank has increased its participation. <u>Increased commissions (compared to the 1987 credit agreement) on the amount drawn over £40b:</u> Participation fee : + 25 bp for the amount drawn over £4b. Commitment fee : this fee is increased (details non available) for the amount drawn over £4b.	Similar to the 1990 revised credit agreement Additional fee (roughly £10,500 per lender) to compensate decreased security following the issuance of senior debt.	Front-end fees : 150 bp + £1m Agency fee: £200,000 per year Commitment fee : 1 % per year charged on undrawn part.												
Spread	<u>Spread on main credit (£4b)</u> To completion date : 125 bp After completion : 100 bp (125 bp if after the completion date repayments by Eurotunnel fall short of the predicted repayment schedule) <u>Spread on line of credit (£1b)</u> To completion date : 175 bp After completion date : 125 bp (150 bp if after the completion date repayments by Eurotunnel fall short of the predicted repayment schedule)	Increased spreads varying according to the amount drawn. New margins per year are as follows: <table><tr><td></td><td>To completion</td><td>After completion</td></tr><tr><td>Up to £4b</td><td>150 bp</td><td>125 bp</td></tr><tr><td>Between £4b and £6.3 b</td><td>175 bp</td><td>150 bp</td></tr><tr><td>Between £6.3b and £6.8b</td><td>250 bp</td><td>225 bp</td></tr></table> If after the completion date, repayments by Eurotunnel do not respect the regular schedule: applicable margin increased by 12.5 bp.			To completion	After completion	Up to £4b	150 bp	125 bp	Between £4b and £6.3 b	175 bp	150 bp	Between £6.3b and £6.8b	250 bp	225 bp	Spread: 2.5 % per year reducing to 2% per year after June 1997 provided that at least 85% of the 1993 warrants have been exercised
	To completion	After completion														
Up to £4b	150 bp	125 bp														
Between £4b and £6.3 b	175 bp	150 bp														
Between £6.3b and £6.8b	250 bp	225 bp														

Table 5 (continued)

			05/94 issuance of senior debt and amendment of junior debt credit agreement	
	11/87 junior debt agreement	11/90 amendment	Amendment	New senior debt
Security / standstill and substitution right	If an event of default occurs and is not waived, opening of a 18 month standstill period this period, banks are not allowed to accelerate payments and to enforce their security. At the end of the standstill period, if no restructuring plan is approved by lenders, the banks can: - ask for early repayment (bankruptcy) - exercise their substitution right (lenders assume management and take over the concession until the banks obtain full repayment)		to negotiate a rescheduling. During	The preceding terms concerning the standstill period and the substitution right apply. Senior debt has first ranking security interests over Eurotunnel's assets
General covenants	- Commercial opening of the tunnel after 07/94 - Rational expectations of lenders that a delay in the opening or a cost overrun might occur	- Commercial opening of the tunnel after 07/94 - Rational expectations of lenders that a delay in the opening might occur or that the indebtedness of Eurotunnel might exceed projected amounts by more than £200m	General covenants dropped	
Junior / Senior debt service covenant	(NPV of net CF until 2005)/ (Junior bank debt) <i>Default if < 1</i>		(NPV of net CF until 2020 after deducting repayments on senior debt maturing before 2020)/ (Junior debt maturing before 2020) <i>Default if < 1</i>	(NPV of net CF until 2006)/ (Senior debt repayable up to 2006) <i>Default if < 1.2</i>
Global debt service covenant	(NPV of net CF until 2020)/ (Total debt) <i>Default if < 1.3</i>	(NPV of net CF until 2012 after deducting interests on debt maturing after 2012)/ (Total debt maturing before 2012) <i>Default if < 1</i> (NPV of net CF until 2020 after deducting interests on debt maturing after 2020)/ (Total debt maturing before 2020) <i>Default if < 1.2</i>	(NPV of net CF until 2020 after deducting interests on debt maturing after 2020)/ (Total debt maturing before 2020) <i>Default if < 1</i>	
Operating Cash Flow covenant	(Annual net CF)/ (Annual interests charges + repayments) <i>No refinancing if < 1.1</i>			
Dividend covenant	(NPV of net CF until 2005)/ (Junior bank debt) <i>No dividend if < 1.25</i>	(NPV of net CF until 2012 after deducting interests on debt maturing after 2012)/ (Total debt maturing before 2012) <i>No dividend if < 1.25</i>	(NPV of net CF until 2020 after deducting interests on debt maturing after 2020)/ (Total debt maturing before 2020) <i>No dividend if < 1.1</i>	

Figure 2. The evolution of Eurotunnel's stock price from its November 1987 IPO through the September 1995 suspension of payments on junior debt.

Stock data are from Datastream.

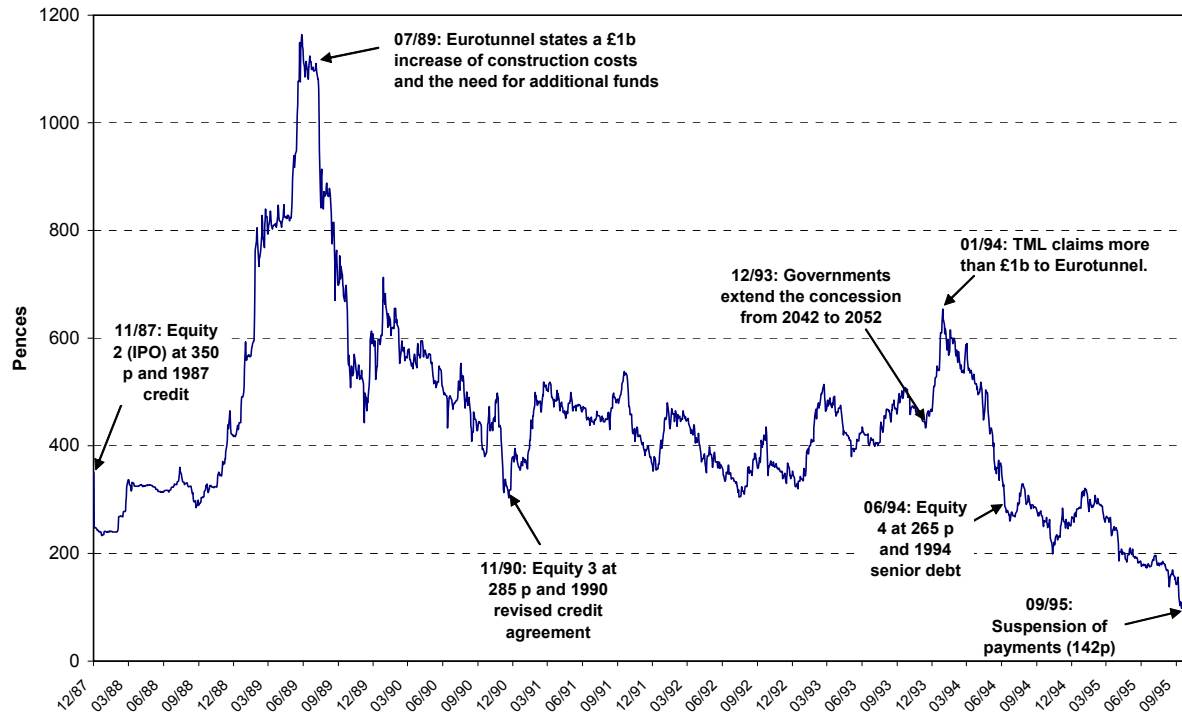


Figure 3. Projected and actual Eurotunnel's revenues (in million £)

Sources: 1987 prospectus; 1990 and 1994 Rights Issue Documents; 1997 Financial Restructuring Proposals; Eurotunnel Annual Reports

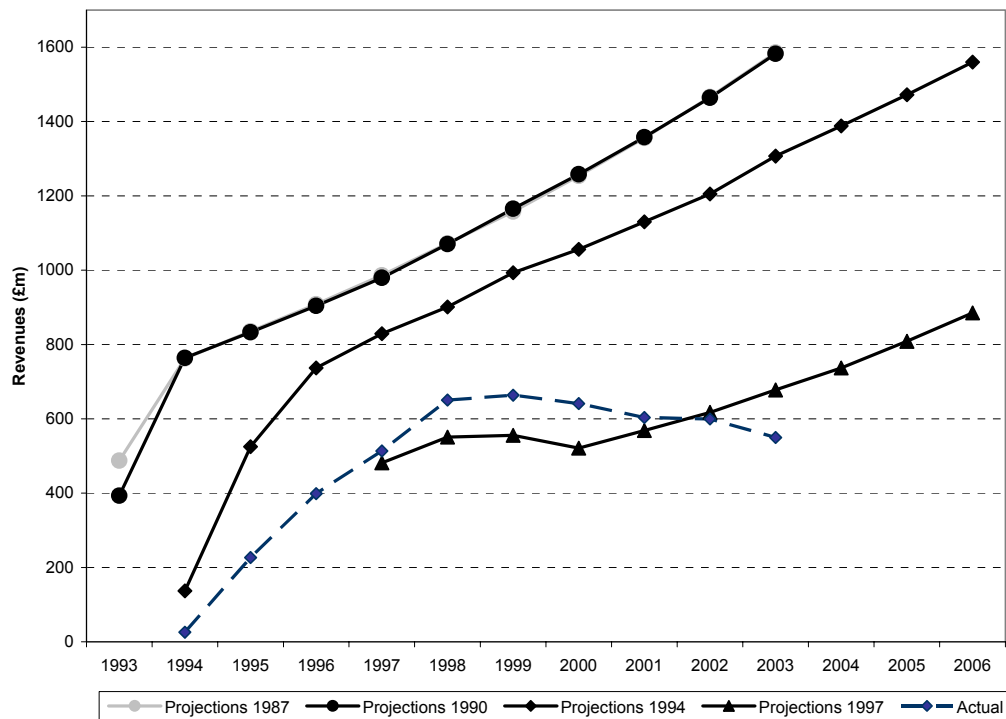


Table 6. Timing of the 1995-1998 Financial Restructuring

Sources: Eurotunnel (1997 Financial restructuring proposals) and financial press.

September 1995	Eurotunnel's Board decides to suspend interest payments on the Junior Debt. Beginning of the Standstill Period (due to expire on March 1997).
February 1996	The President of the Tribunal de Commerce de Paris (The Paris Commercial Court) appoints two Mandataires ad hoc in order to facilitate negotiations between Eurotunnel and the banks.
October 1996	Eurotunnel announces an agreement with the Steering Group on the terms of a financial restructuring. Some details of the plan are released.
Mars 1997	The lenders extend the standstill to December 1997.
May 1997	Eurotunnel releases a document (the "Prospectus") detailing the terms of the financial restructuring proposal.
July 1997	Shareholders approve the terms of the proposed financial restructuring.
November 1997	Eurotunnel announces that the restructuring plan has received the approval of banks and senior lenders.
January 1998	Banks and Senior Lenders formally sign the plan.

Figure 4. Evolution of Eurotunnel's share price (and transaction volume) during the standstill period

Sources: Datastream and financial press.

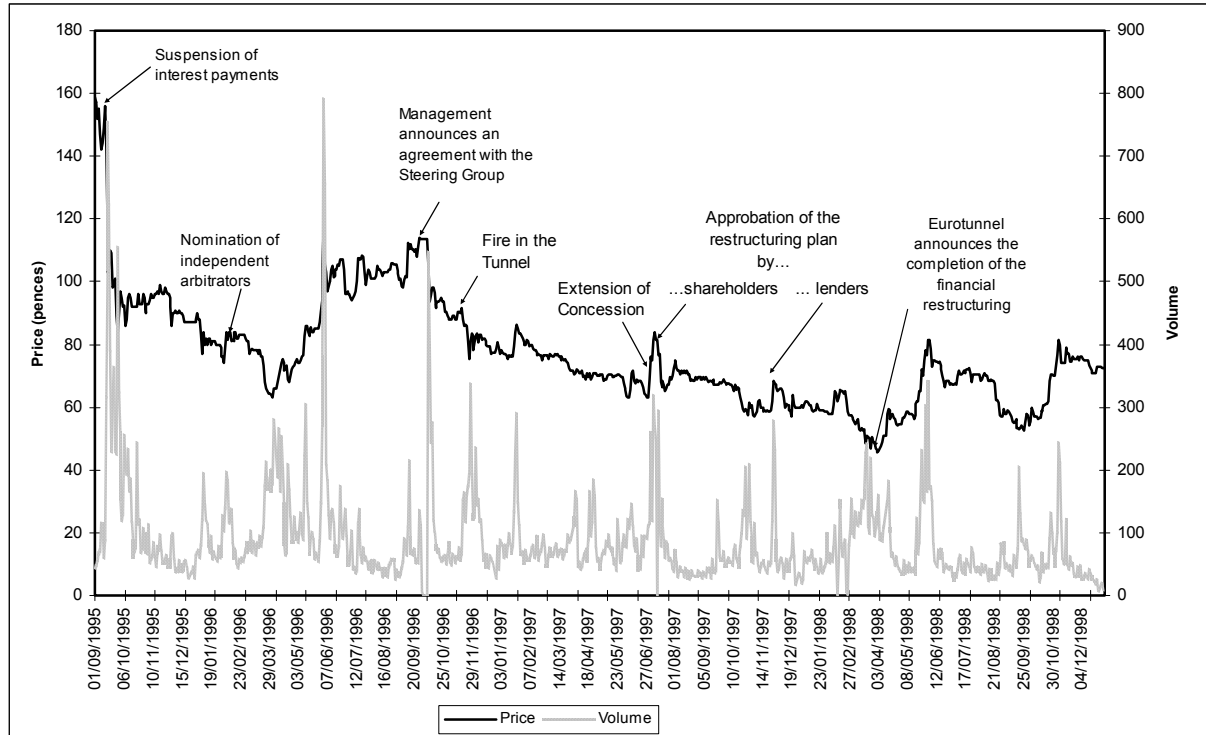


Table 7. Instruments distributed in the 1995-1998 Eurotunnel's restructuring in exchange of existing Junior Debt

The data are drawn from Eurotunnel (1997, Financial restructuring proposals) and correspond to the information transmitted to Eurotunnel's shareholders before their approbation (more details on the restructuring instruments are available in Appendix C).

Instruments distributed	% of existing Junior Debt	Main terms
Common Equity	11.68%	Issuance of 769,230,800 new shares at a price estimated at £1.24
Convertible Equity Notes	11.68%	Issuance of 645,161,300 equity notes: <ul style="list-style-type: none"> – 4.45% coupon payable semi-annually – Maturity: December 31, 2003 – Repayment in Units by 12/31/03 (one for one basis) or in cash through the exercise of newly created 2001 and 2003 warrants.
Participating loan notes	14.02%	<ul style="list-style-type: none"> – 1% fixed rate during the Stabilization Period (until December 31, 2005) – Additional variable coupon after 2005: 30% of available net cash – Maturity: April 2040
Resetable facility	17.52%	<ul style="list-style-type: none"> – Until 2003: 5.28% fixed rate on the French Franc tranche and 7.03% on the Sterling tranche – 2004-2006: Resetable at UK/French Government Bonds + 0.5% – 2007-Maturity: Resetable at UK/French Government Bonds + 1.5% – Maturity: 2048 to 2050
New Junior Debt	45.10%	<ul style="list-style-type: none"> – Until 2003: 5.28% fixed rate on the French Franc tranche and 7.03% on the Sterling tranche – After 2003: LIBOR + 1.25% – Maturity: 2005 to 2025
	100%	

Table 8. Impact of the plan on the repartition of ownership between the banks and existing shareholders

To compute the repartition of ownership, we consider the following facts defined in the restructuring plan: (i) Each existing shareholder receives one 2001 warrant and one 2003 warrant (ii) To obtain one equity, an existing shareholder needs eight 2001 warrants and three 2003 warrants (iii) If warrants are exercised, 2001 warrantholders can subscribe to one Eurotunnel share at £1.24 and 2003 warrantholders at £1.43 (iv) The restructuring plan creates 645,161,300 equity notes attributed to junior lenders (v) At maturity, these equity notes are either converted on a one-to-one basis or repaid in cash (at £1.48 per equity note). (vi) The restructuring plan stipulates that the proceeds of any exercise of 2001 warrants can be used to repay in cash equity notes up to a maximum of 86.5 million equity notes. The same principle applies for 2003 warrants with a maximum fixed to 253.5million equity notes. We consider a 9.00 FRF/£ exchange rate.

Case n°1: Existing shareholders exercise 2001 and 2003 warrants; Equity notes partly repaid in cash thanks to warrants' exercise					
	Existing shareholders	% of capital	Lenders	% of capital	Total number of shares
Existing shares in April 1997	919 553 419	100.00%	0	0.00%	919 553 419
Common equity attributed to the banks	919 553 419	54.45%	769 230 800	45.55%	1 688 784 219
Repayment of equity notes (1)	919 553 419	46.12%	1 074 392 100	53.88%	1 993 945 519
Exercise of 2001 warrants	1 034 497 596.38	49.05%	1 074 392 100	50.95%	2 108 889 696
Exercise of 2003 warrants	1 341 015 402.71	55.52%	1 074 392 100	44.48%	2 415 407 503
Case n°2: No exercise of 2001 and 2003 warrants; Equity notes entirely repaid in units					
	Existing shareholders	% of capital	Lenders	% of capital	Total number of shares
Existing shares in April 1997	919 553 419	100.00%	0	0.00%	919 553 419
Common equity attributed to the banks	919 553 419	54.45%	769 230 800	45.55%	1 688 784 219
Repayment of equity notes	919 553 419	39.40%	1 414 392 100	60.60%	2 333 945 519

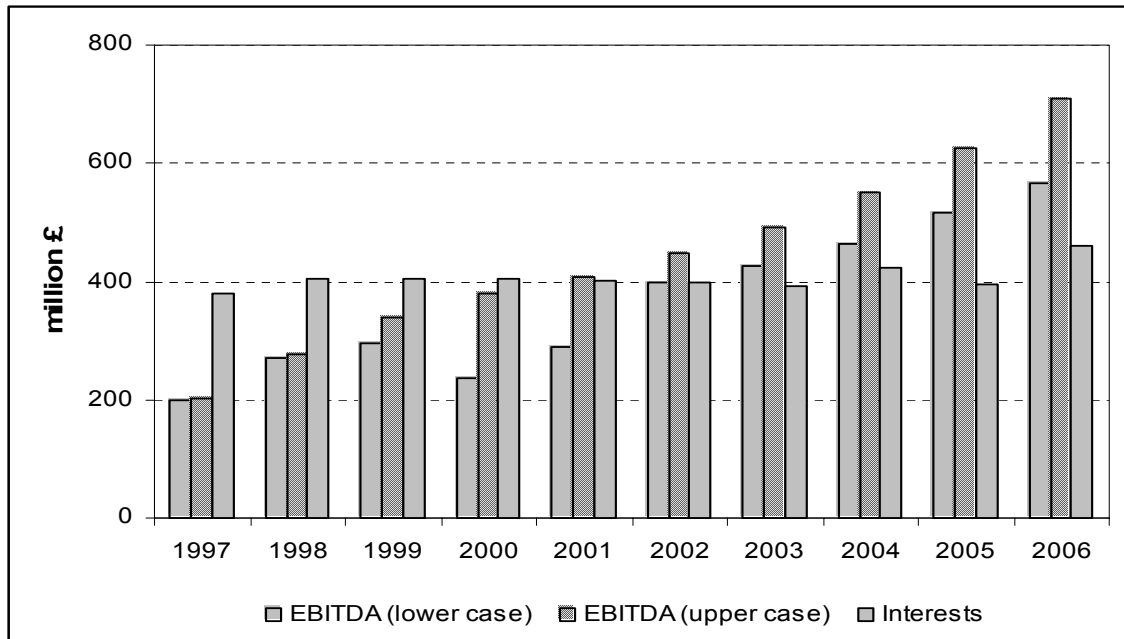
Table 9. Valuation of the 1995-1998 restructuring instruments (estimated in million £)

The data used to compute our valuation are based on the information released by Eurotunnel in its May 1997 Financial Restructuring Proposals. We also use internal documents from several banks participating to the loan syndicate. We compute the book value of old junior debt by using a 9.00 FRF/£ exchange rate and obtain a £8,194 million book value. The face value of each restructuring instrument is obtained by applying the percentage of the old junior debt specified in the restructuring plan. The present value is obtained by discounting projected cash flow (More details are available in Appendix C). The market value of old junior debt was obtained through information provided by one participant bank. In early 1997, Eurotunnel's junior debt traded at 43% of the old junior debt's face value on the unofficial secondary market in Eurotunnel debt.

Restructuring instruments	Face value	Present value of the restructuring package	
		Lower case	Upper case
New junior bank debt	3695	2493	2989
Resettable facility	1436	295	405
Participating loan notes	1149	30	119
Convertible notes	957	299	417
Units	957	384	576
Value of the new package	8194	3500	4507
% of old junior debt face value		43%	55%
% of old junior debt market value		100%	128%

Figure 5. A comparison of projected EBITDA and interest charges in the years following the 1995-1998 restructuring plan (in million £)

Data are drawn from Eurotunnel's 1997 financial restructuring proposals.



Appendix A: Comparison of Eurotunnel and Ferruzzi
(the data on Ferruzzi are drawn from Penati and Zingales 1998)

Characteristics	Ferruzzi	Eurotunnel
Nature of the firm	<ul style="list-style-type: none"> – Privately held with family control (holding 48% of the voting stock) – Diversified conglomerate 	<ul style="list-style-type: none"> – Publicly held with dispersed shareholding – Project company
Origin and form of distress	<p>Pure financial distress</p> <ul style="list-style-type: none"> – Most of the Group's companies had positive margins – Mounting stock of debt due to unstoppable acquisition policy 	<p>Economic and financial distress</p> <ul style="list-style-type: none"> – Construction delays and overruns – Lower than expected operational margins after the construction of the Tunnel – Debt overhang due to cost overruns
Restructuring plan	<ul style="list-style-type: none"> – Debt for equity swap and write off (representing 15% of the debt face value) – Speed of the reorganization (eight months) 	<ul style="list-style-type: none"> – Debt for equity swap but no write off – Slowness of the reorganization (two and a half year)
Result of the debt restructuring	<ul style="list-style-type: none"> – Asset Sales – No further distress 	<ul style="list-style-type: none"> – No complementary (operational) measures – Further distress (new restructuring planned for 2005)

Appendix B : A summary of conflicts between Eurotunnel and co-contractors (except banks and shareholders)

Contract	Co-contractor	Date	Origin and resolution of the conflict
Construction contract	TML	1988 to 1997	<p>Mid-1988: Eurotunnel deplores the delays and announces a 7% increase in costs.</p> <p>January 1989: A first settlement (Joint Accord) is signed (extension of the opening date by one month to June 1993, settlement concerning all outstanding payments,...).</p> <p>June 1989: Disagreements over the costs of the lump sum works (£384 million in dispute).</p> <p>February 1990: Second accord where TML accepts to assume a higher part of costs overruns.</p> <p>October 1991: Dispute on extra costs of the cooling system. TML threatened to stop work. The matter was taken to the Disputes Panel (March 1992) and to the Arbitration Panel (September 1992). TML received £200 million.</p> <p>January 1994: Dispute concerning the electromechanical part of the Tunnel and the rolling stock. In January 1994, TML claimed more than £1 billion to Eurotunnel. A settlement was signed on April 1994: Eurotunnel agrees to pay but in return TML guarantees £85 million in the May 1994 rights issue. Another claim was led by Bombardier for additional costs on Le Shuttle wagons. A settlement was found in 1994 where Bombardier received £195 million partly by cash and partly by shares (25 million units).</p> <p>December 1995: Eurotunnel submitted a claim to the Disputes Panel on the ground that TML mismanaged the procurement of rolling stock. The claim was rejected in April 1997.</p>
Railway contract	The Railways	1995	<p>March 1995: Eurotunnel initiated an arbitration before the International Chamber of Commerce in order to renegotiate the Railway Usage Contract. Eurotunnel argued that the Railways breached the contract on several features (delay in introduction of Eurostar, delay in the construction of high speed rail link between London and the tunnel,...) and claimed £2 billion. This claim was rejected in November 1995</p>
Concession	French and English Governments	1993 and 1997	<p>December 1993 : The governments agreed to extend the Concession from 55 years to 65 years</p> <p>December 1997 : The governments agreed to extend the Concession from 65 years to 99 years</p>
Competitors		1995	<p>March 1995 : A claim submitted by Eurotunnel for distortions in competition between different modes of transport (due to the extension of duty-free regime for ferries) was rejected by a British court. Eurotunnel brought a new claim before the French Tribunal de Commerce de Paris, then before the European Court of Justice. Finally, the claim was rejected.</p>

Appendix C: Valuation of restructuring instruments

This appendix presents the main assumptions used to compute lower and upper valuations of the restructuring instruments. For all instruments, our methodology is the following: (1). Compute the face value of the new instrument at October 15, 1996 from the outstanding amount of old junior debt at this date (£8194m based on a 9.00 FRF/£ exchange rate) and from the percentage of old junior debt converted in the new instrument. (2) Compute the interests and amortizations of the new instrument. (3) Compute the discounted cash flows (interests plus amortization). The selected discount rates vary according to the projected risk of the instrument.

Our valuation considers that, during the Stabilization period (until December 31, 2005), the payment of interests charges on the new instruments are partly deferred through the issuance of Stabilization notes. The details on new instruments were obtained through the 1997 financial restructuring proposals and documents obtained from participants of the bank syndicate. We assume: Libor = 5.30% and Interest rate on Government Bonds= 6.05%.

Instruments	Characteristics	Assumptions for valuation
New Junior Debt	Amount due at 10/15/1996: £3695.5 m (45.10 % of old Junior Debt) Interest until 2003: 7.03% on the £ tranche and 5.28% on the French franc tranche payable semi-annually Interest after 2003: Libor + 125 bp Amortization: from 2005 to 2025	Discount rates: 9% - 11% No issuance of stabilization notes
Resetttable Facility	Amount due at 10/15/1996: £1435.6 m (17.52 % of old Junior Debt) Interest until 2003: 7.03% on the £ tranche and 5.28% on the French franc tranche payable semi-annually Interest for years 2004 – 2005: UK/French Government Bonds + 50 bp Interest for years 2006 and after: UK/French Government Bonds + 150 bp Amortization: from 2048 to 2050	Discount rates: 12.5% - 15% Issuance of stabilization notes until 2004
Convertible Equity Notes	Amount due at 10/15/1996: £957 m (11.68 % of old Junior Debt) Interest: 4.45% payable semi-annually Amortization: 12/31/2003 on the basis of 1 equity for 1 note	Discount rates: 12.5% - 20% No issuance of stabilization notes At maturity, we assume the value of equity is £0.5
Participating loan notes	Amount due at 10/15/1996: £1148.8 m (14.02 % of old Junior Debt) Fixed interest until maturity: 1% fixed rate payable annually Variable interest for years 2006 and after : 30% of available cash flow Amortization: from 2039 to 2040	Discount rates: 15% - 25% Issuance of stabilization notes until 2004 Available Cash Flow: computed with projections published in the 1997 Financial Restructuring Proposals = Net cash flow operating – Capital expenditure – Interests and fees – Decrease in bank loans.
Common Equity	Amount due at 10/15/1996: £957 m (11.68 % of old Junior Debt) Issue price: £1.24 Number of equities created: 769 million	No discount (banks received equity notes quite immediately). For the value of equity, we take £0.5 for the lower case and £0.75 (corresponding to the price in March 1997) for the upper case.
Stabilization notes	Available to satisfy interest payments during the stabilization period to the extent that interest cannot be paid in cash Maximum amount: £1850 m Interest until 2004: 0% during the stabilization period Interest after 2004: Inter-Bank rate + 125 bp payable annually Amortization: from 2018 to 2026	Discount rate: 25%